Evaluation of the

HBCU Capacity Building Program

Final Report

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
Public Health Service
Office of Minority Health

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Presented to

U.S. Department of Health and Human Services
Office of Minority Health

by

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EVALUATION OF THE HBCU CAPACITY BUILDING PROGRAM

EXECUTIVE SUMMARY

Program Background

The HBCU Capacity Building Program was launched by the Public Health Service (PHS) in 1992 as a demonstration effort intended to increase the involvement of historically Black colleges and universities (HBCUs) in health and social service programs funded by PHS and other agencies. This demonstration program was founded on the general hypothesis that an HBCU could compete more effectively for federal contracts and grants if it had a comprehensive and fully functional sponsored programs office (SPO). This hypothesis followed naturally from observations, made by PHS administrators, that many HBCUs had not been successful in obtaining and administering PHS grants and contracts, despite the fact that those HBCUs possessed significant programmatic capabilities. It was also observed that numerous federal programs had sought to modernize or expand the *programmatic infrastructure* at HBCUs, through investments in facilities, equipment, and personnel who could implement competitive projects in research, training, and service. However, federal programs had done little to advance the *administrative infrastructure*, which would include such functions as (1) identifying institutional capabilities, (2) marketing institutional capabilities, (3) identifying funding opportunities, (4) helping faculty to pursue those opportunities through competitive and responsive proposals, and (5) helping faculty to meet the administrative requirements of awarded grants and contracts. These five functions are typical of a comprehensive and fully operational SPO.

Given the observed shortcomings in the administrative infrastructure of many HBCUs, the *HBCU Capacity Building Program* was structured as a cooperative agreement that provided four years of funding for salaries, office equipment, and other expenses associated with establishing and operating an SPO. As partners in the agreement, PHS and, in the latter two years of the program, the Office of Minority Health (OMH) provided technical assistance to the HBCUs through direct contact and through federally contracted technical assistance providers. In a competitive process, the following four HBCUs were awarded cooperative agreements in 1992 as participants in this four-year program:

- Delaware State University;
- Saint Paul's College;
- Savannah State University; and
- University of Maryland Eastern Shore

By the end of the four-year demonstration effort, PHS and OMH had invested a total of $3,183,621 in direct funding to the four HBCUs, as well as investing in the additional cost of technical assistance provision. With such a substantial investment in the capacity building, it was deemed important to invest appropriate resources in a careful evaluation of the program's effectiveness.

Structure and Methods of the Evaluation

During the fourth year of the program, OMH initiated a program evaluation to test the general hypothesis that the establishment of an SPO would enhance the ability of each of the four HBCUs to compete for grants and contracts. *Expand Associates* was engaged to conduct the evaluation, based on the organization's experience with evaluation research and with the development of sponsored programs administration at HBCUs.

The program evaluation was structured in two ways. First, the evaluation was guided by a set of six evaluation questions that were raised either directly or indirectly by OMH:

1) Did the program result in the establishment of offices of sponsored programs, and the adoption of uniform processes at the institutions participating in the demonstration?

2) Did the program result in increased funding of research, training, evaluation, and service projects at the institutions participating in the demonstration?

3) Did the program result in increased or enhanced activities in research, training, evaluation, and services at the institutions participating in the demonstration?

4) Were the cooperative efforts (technical assistance) of the Federal and non-Federal partners instrumental in the accomplishment of program goals?

5) In what ways was the program success dependent on contextual variables at each institution?

6) Did the program produce lasting change and sufficient momentum to ensure the long-term survival of a fully functional SPO?

As a second major step in structuring the evaluation effort, the evaluation team used available data from the 1992 program announcement and from the OMH program files to develop a "logic model" of the program. As in similar evaluation efforts, the logic model was designed to document the explicit and implicit expectations of PHS, regarding the links between program assumptions, activities, and intermediate and final outcomes. By articulating these features of the program and the path by which the program was expected to lead to desired outcomes, the logic model eased the operationalization of a theory of the program processes and outcomes.

Specifically, this model facilitated the development of theoretically consistent data collection instruments and procedures. These procedures included the following basic elements:

- A *Data Summary Form*, sent to each HBCU as a means of gathering simple identifying data, along with categorical and quantitative indicators of program implementation and outcomes;

- Telephone interviews, largely structured according to a carefully designed interview protocol, with the two Technical Assistance Providers, each of whom is an SPO Director at her respective non-HBCU institution of higher education;

- Face-to-face interviews, also structured according to interview protocols, with the two individuals who served as Federal Program Officer, one during the first two years of the program, and the other during the last two years of the program; and

- A site visit to each of the four HBCUs, guided by a site visit protocol for the gathering of observational data and interview data from the following sources: the HBCU President; the Director and staff of the SPO; and members of the faculty, including new and seasoned participants in sponsored programs, who could provide their perspectives on the effectiveness of the new SPO.

The resulting evaluation data included a wide variety of quantitative and categorical indicators of program implementation and outcomes, as well as qualitative data that the evaluation team organized into case histories. The quantitative and categorical data addressed the following aspects of the program:

- Amounts of PHS/OMH funding received by each HBCU for capacity building each year, by expense category;

- Levels of SPO staffing at each HBCU;

- Number of computers used for sponsored programs administration, before and after capacity building;

- Relevant policy issues addressed at each HBCU;

- Number of competitive awards received by each HBCU during each year of capacity building;

- Dollar amount of awards received by each HBCU during each year of capacity building,

- Number of unfunded submissions made by each HBCU during each year of capacity building,

- Dollar amount of unfunded submissions made by each HBCU during each year of capacity building;

- Dollar amount of unfunded submissions still pending at the time of data collection;

- Number of faculty receiving awards as Principal Investigators (PIs) during each year of capacity building;

- Number of new PIs recorded at each HBCU during each year of capacity building; and

- Number of academic departments represented by PIs receiving awards at each HBCU during each year of capacity building.

The results of the quantitative and categorical data collection and analysis provide useful indicators, which point to certain successes of the program, while also indicating areas where program improvements may be beneficial. Such data are not intended, however, to provide significant explanation of *how* or *why* particular processes were pursued or particular outcomes were achieved.

In order to give greater meaning to the quantitative and categorical data, the evaluation team utilized all available data to construct a case history of each HBCU, discussing the pre-program conditions, contextual factors, and unique characteristics of each HBCU and its capacity building efforts. Thus, the case histories weave together the quantitative data with qualitative information gleaned from interviews, observations, and archives. Although each case history is unique, the logic model facilitated the structuring of the case histories in a consistent format. In turn, the consistent format of the case histories permitted the conduct of systematic case comparisons, using an adaptation of the *comparative method* developed by sociologist Charles Ragin. This comparative method applies the strict logic of Boolean algebra as a rigorous means of testing the consistency of program inputs and outcomes, and testing the association between inputs and outcomes among the individual cases. For purposes of this comparative analysis, "inputs" include *assumptions* about the needs of each HBCU, *activities* implemented at each HBCU as part of the program, and *contextual factors* specified by PHS as likely influences on the program.

Together, the quantitative and qualitative data analyses provide a picture of considerable success in program implementation, with indications that the program has already yielded many of the desired outcomes. The data also provide insights regarding ways in which such capacity building of administrative infrastructure could achieve even greater success in the future. Highlights of these findings and recommendations are presented below, as they appear at the conclusion of the evaluation report.

Summary of Significant Findings

Overall, the analyses indicate that all four participating HBCUs benefited from the *HBCU Capacity Building Program*. It is important to be explicit, however, in summarizing the findings in a manner that relates directly to the six evaluation questions, as well as other pertinent questions identified by the evaluation team. Accordingly, while all of the findings are important and will enhance the understanding of factors that might lead to success in developing and operating an SPO, certain findings must be considered especially significant as key indicators of successful program processes or outcomes. Those findings that have been deemed as *significant* are presented in the listing which follows. The first six findings pertain to the six evaluation questions, to the extent that they may be answered just at the end of the program. The additional findings address fundamental issues that appear to have had a major impact on the effectiveness of the capacity building program.

1) The program succeeded in establishing a sponsored programs office (SPO) at each of the four participating HBCUs, including the adoption by these offices of uniform processes for pre-award and post-award functions of sponsored programs administration.

2) The program was clearly found to have resulted in increased funding for research, training, evaluation, and service projects at two of the participating HBCUs; performance at the other two HBCUs showed initial increases, but did not sustain a clear trend of increased participation.

3) The program clearly resulted in enhanced sponsored program activities at one of the participating HBCUs, as indicated by a greater variety of academic departments that pursued contract and grant awards. To a lesser extent, two of the other HBCUs showed increased involvement of their various departments in pursuit of such awards.

4) The cooperative efforts and technical assistance of the Federal and non-Federal partners in the capacity building program were regarded by staff of the SPOs at all four of the participating HBCUs as being quite helpful to the establishment and operation of their offices. However, those efforts were not identified as being instrumental to the accomplishment of one of the program's primary goals, to increase the acquisition of contract and grant awards.

5) Program success at all four participating HBCUs, as measured by increased submissions and awards, as well as effective office operation, was found to have been dependent on only one major contextual factor: the positioning of the SPO within the administrative hierarchy of the institution's organizational structure.

6) The program led to lasting change in the willingness and ability of the President and other top administrators, at all four participating HBCUs, to support an SPO

staff and facility, at least in the first year immediately following the end of the *HBCU Capacity Building Program*.

7) As of the data collection period ending in February, 1997, no policies had been *implemented* at the four participating HBCUs, although established at one of these institutions and discussed at the other three, for channeling a fixed percentage of indirect expense funds recovered through contract and grant awards, toward the operating budgets of their SPOs. However, a commitment to institutionalize such offices has been made by all four of the HBCUs.

8) The outlay for salary is the greatest expense required for the operation of a fully functional and comprehensive SPO, as reflected in the budgets for annual awards from PHS and OMH to the four participating HBCUs.

9) The capacity building efforts led to greater dollar amounts for contracts and grants that were received by the four participating HBCUs, collectively. The program did *not*, however, lead to a collective increase in awards from DHHS.

10) The development of an effective administrative infrastructure, in the form of an SPO, was found to be a *necessary* institutional component for the pursuit of sponsored programs. However, at all four HBCUs, this type of capacity building was found *not* to be *sufficient* for increasing involvement in sponsored programs, as measured through increased contract and grant awards. Evidence points to the necessity of also having a strong programmatic infrastructure of facilities, equipment, and personnel.

Given these significant findings, and other related findings presented in the analytic sections of this report, it is evident that the *HBCU Capacity Building Program* largely validated the general hypothesis that was the basis of the PHS decision to launch the demonstration program:

> *This demonstration program is to assess whether an infrastructure responsible for the administration of sponsored programs will enable HBCU institutions to increase their participation in Federal and private sector health related scientific, technical and service activities and thereby improve their capacity to conduct such activities* (Federal Register, Vol. 57, No. 123, page 28522).

The program clearly succeeded in demonstrating that an SPO can and, under a variety of conditions, *does* enable an HBCU to increase its sponsored programs participation The program distinctly increased the capacity of the four participating HBCUs to conduct externally funded scientific, technical, and service activities, which relate to health, social services, and many other disciplines. Thus, while the program did not achieve some of its intended final outcomes, it was quite successful in achieving the majority of the intended outcomes

Summary of Major Recommendations

The following recommendations are drawn from findings presented above. These recommendations are strictly limited to issues that are within the purview of OMH and DHHS, regarding actions that can be taken to conduct effective capacity building at HBCUs. Based on the evaluation of the *HBCU Capacity Building Program*, the following major recommendations are offered:

1) DHHS should, through OMH and other appropriate avenues, use this demonstration program and its core elements as the basis for further capacity building at other HBCUs that lack an administrative infrastructure for sponsored programs.

2) Future capacity building, focused on the administrative infrastructure for sponsored programs, should be coordinated with efforts to ensure the competitiveness of the programmatic infrastructure of each participating HBCU, if significant impacts are to be sought within a given project period.

3) As part of capacity building efforts at HBCUs, the SPO administrators should be provided long-term training, as well as on-the-job technical assistance, to give each SPO Director an adequate understanding of how to establish and operate a sponsored programs office, prior to the launching of that office.

4) The technical assistance component of the program should be modified and intensified to ensure that administrators at each HBCU fully understand and implement suggested principles and procedures of sponsored programs administration. Such modification would include careful monitoring to determine whether the HBCU heeds advice in a timely manner. It could also include an explicit partnership between each HBCU and another institution with a successful SPO.

5) The development of a sponsored programs office should include greater integration, within the sponsored programs office, of post-award activities, such as monitoring, accounting, and administrative guidance to faculty. Alternatively, the program should include more direct attention to the provision of technical assistance and other support to improve coordination between the SPO and the Business/Finance office, which often plays a major role in post-award administration.

6) In implementing the type of capacity building program initiated by PHS, the participating institution should be strongly encouraged to position the sponsored programs office directly under the President, or directly under the Vice President for Academic Affairs, in order to maximize the visibility of the office to faculty, and to minimize the potential for other administrators to reprioritize or de-emphasize the primary mission of the office.

7) In the building of HBCU capacity through SPO development, the participating institution should be strongly encouraged to institutionalize the office of sponsored programs by committing a significant percentage of indirect expense funds, obtained through grants and contracts, toward the operating expenses of the office.

8) The funding agency, for future capacity building efforts, should develop and disseminate explicit recordkeeping requirements, based on a comprehensive evaluation plan, and ensure that participating HBCUs, technical assistance providers, and agency personnel maintain the required records in an accurate and accessible manner as a condition of participating in the program.

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I. BACKGROUND OF THE PROGRAM EVALUATION

A. EVOLUTION OF THE HBCU CAPACITY BUILDING PROGRAM

The *HBCU Capacity Building Program* was launched by the Public Health Service (PHS) in 1992 as a unique Federal effort to assist historically Black colleges and universities (HBCUs). The program was designed to address challenges that had been frequently encountered by personnel within PHS and throughout the U.S. Department of Health and Human Services (DHHS), particularly related to administrative shortcomings at HBCUs in their attempts to engage in competitive, responsive, and required practices for obtaining and managing federal grants and contracts. Thus, the *HBCU Capacity Building Program* was predicated on the concept that federal investments in developing the administrative infrastructure for sponsored programs at HBCUs would help to improve the overall capacity of the institutions to participate in federally funded projects. In turn, the increased competitiveness and responsiveness of the HBCUs would have the effect of expanding the access of PHS and DHHS to the institutional resources of HBCUs, which have traditionally focused on assisting many of the same vulnerable populations that are of interest to DHHS.

In concrete terms, the improvement of sponsored programs administration at HBCUs would require the creation of a comprehensive sponsored programs office at institutions which lacked such an office. This aim was based on the general observation by PHS officials that many successful research-intensive institutions have a single centralized office that specializes in helping faculty to locate, acquire, and manage grants and contracts for research and other activities. These PHS observations have been corroborated by other agencies and organizations, as recorded in such publications as the *Chronicle of Higher Education* and the *Journal of the Society for Research Administration.*

Given the interest within PHS to increase its involvement with HBCUs, in accordance with Executive Order 12876, it was decided by this agency that the program should be implemented, with sufficient funds to provide "seed money" for the initial equipping and staffing of a sponsored programs office. The program would also include the availability of technical assistance to guide the HBCUs over a four-year period of start-up and initial operation of the office.

In June of 1992, a program announcement was published in the *Federal Register*, inviting HBCUs to apply for this grant assistance, in the form of a cooperative agreement, aimed at demonstrating and evaluating the effectiveness of this type of capacity building. Four HBCUs were selected, through a competitive process, to receive the cooperative agreements from PHS under the *HBCU Capacity Building Program*. The four program participants included the following:

- Delaware State College,
- Saint Paul's College (SPC),
- Savannah State College, and
- University of Maryland Eastern Shore (UMES).

It should be noted that, during the four-year program, the name of Delaware State College was officially changed to Delaware State University (DSU), and the name of Savannah State College was changed to Savannah State University (SSU).

The *HBCU Capacity Building Program* was unique partly because of the significant monetary investment made by PHS, in the form of the cooperative agreements, to permit four HBCUs to make targeted and tailored enhancements to their own administrative structures. Other programs had been created by agencies of DHHS and other executive departments to provide training in specific elements of sponsored programs administration, without providing such seed money. The program was also considered unique because of the partnership that was established through the cooperative agreement, giving PHS a significant responsibility for guiding each

HBCU and helping to maximize the program's success. This guidance included the provision of technical assistance, by the PHS Program Officer directly, and through two consultants engaged by PHS, both of whom were experienced sponsored programs administrators who had helped to launch new sponsored programs offices at other non-HBCU institutions.

The considerable four-year investment made by PHS, and by OMH under the recent reorganization of DHHS, was based on a clear set of basic hypotheses about the positive effects that such capacity building would have on the participating institutions. Now that the cooperative agreements have ended, OMH has taken the important step of conducting an assessment of the impact of the program, utilizing the pertinent expertise of the evaluation team assembled by *Expand Associates* of Silver Spring, Maryland. From the start of the program, the expressed intent of PHS was to test its hypotheses regarding the efficacy of such capacity building. Accordingly, the evaluation approach of *Expand Associates* has focused on the specific expectations cited by PHS in the original program announcement that solicited HBCU applications in 1992. These expectations are discussed in detail in the following sub-section.

B. DEFINING ADMINISTRATIVE INFRASTRUCTURE

A major motivation for PHS to develop the *HBCU Capacity Building Program* came from the realization that many federal agencies had failed to obtain significant increases in HBCU participation in their programs, despite the investment of considerable amounts of money to update or expand the programmatic capabilities of the institutions. Thus, despite equipment grants, faculty development grants, and other programs aimed at making HBCUs more competitive, HBCUs continued to exhibit limited or uncompetitive responses to program announcements, requests for proposals (RFPs), and requests for applications (RFAs). Administrators within PHS hypothesized that the sparse and non-responsive proposals from HBCUs, and the reputation of some HBCUs as exhibiting non-compliance in project implementation, might simply

reflect a lack of administrative capacity to coordinate, monitor, and facilitate faculty participation in federal programs.

In short, PHS had encountered the distinction between two major types of infrastructure for sponsored programs:

- ***Programmatic Infrastructure***, which includes the personnel, facilities, and equipment used to implement an externally sponsored program; and
- ***Administrative Infrastructure***, which refers to a set of administrative functions that are necessary to support the acquisition and management of externally sponsored programs.

The focus of the *HBCU Capacity Building Program* was exclusively on the development of the ability of the four participating HBCUs to carry out the functions that comprise *administrative infrastructure*. Those functions, which were defined in 1991 through a model developed by the Institute for College Research Development and Support, generally consist of the following:

1) *Institutional Capability Assessment*, including the determination of the programmatic and administrative resources that can be used by the institution to conduct research, training, and service programs;

2) *Institutional Marketing*, including the identification of potential funders, and the promotion of institutional capabilities that might meet the needs of potential funders;

3) *Opportunity Identification*, in which the institution determines a clear match between institutional capabilities and the specific awards that are available from funding agencies;

4) *Proposal Production*, including the provision of assistance to faculty in meeting funder requirements for proposal format and content, as well as providing necessary boilerplate material and institutional assurances and certifications; and

5) *Award Administration*, which involves monitoring and facilitating the proper distribution of awarded funds, as well as facilitating the production

of required reports and ensuring that the institution meets all other legal obligations under each grant or contract.

Appropriate conduct of the evaluation of this type of capacity building, and appropriate interpretation of the evaluative data, require a clear recognition of the program focus on the five functions of administrative infrastructure.

C. GOALS OF THE EVALUATION EFFORT

The evaluation of the *HBCU Capacity Building Program* was structured in stages. As stated earlier, many of the basic aims of the evaluation were established in the original 1992 program announcement. In 1996, OMH developed and published a Scope of Work for the evaluation, in order to solicit proposals for the evaluation effort. As a result, the evaluation was further shaped by *Expand Associates* in its proposal, which was selected for the implementation of the evaluation. Ultimately, through the Initial Project Meeting between the *Expand Associates* project staff and representatives of OMH, the evaluation of the *HBCU Capacity Building Program* was finalized for the pursuit of a clear set of evaluation goals. These goals, presented as follows, have guided the procedures for the collection and analysis of the evaluation data.

Goal 1: To develop and apply a measurement model that provides a logical and systematic test of the effectiveness of the *HBCU Capacity Building Program*;

Goal 2: To identify reliable sources of data describing program processes and impacts;

Goal 3: To gather, through efficient and systematic methods, pertinent primary and secondary data from identified sources;

Goal 4: To apply quantitative and qualitative methods of case study and case comparison analyses which are appropriate tests of the developed measurement model; and

Goal 5: To interpret and transcribe the data into formats that clearly and concisely communicate the results of the analyses.

D. PROGRAM MODEL AND EVALUATION QUESTIONS

The official announcement of the program, as *Cooperative Agreements for Demonstration Projects for Capacity Building at Historically Black Colleges and Universities (HBCUs),* appeared in the *Federal Register* on June 25, 1992. The announcement defined the aim of the program very succinctly:

> *This demonstration program is to assess whether an infrastructure responsible for the administration of sponsored programs will enable HBCU institutions to increase their participation in Federal and private sector health related scientific, technical and service activities and thereby improve their capacity to conduct such activities* (page 28522, Vol. 57, No. 123)

Thus, the program was started with the hypothesis that the program would have the chain of impacts illustrated in Figure 1. It should be noted that the illustrated hypotheses also reflect the more elaborate statement of the program background, which is found on page 28523 of the *Federal Register* announcement. In addition, the program is described as addressing several very specific administrative functions. These specifically cited functions of a sponsored programs office (SPO) define a deeper level of hypotheses about the mechanisms by which the cooperative agreement was expected to have an ultimate impact on HBCU participation in Federal grants and contracts. This second level of hypotheses is presented in Figure 2, along with an illustration that the degree of program impact could be enhanced or undermined by the prior conditions or context of program implementation at each of the four HBCUs.

In developing this evaluation effort, OMH articulated four specific questions that were to be answered through the data collection and analysis:

1) Did the program result in the establishment of offices of sponsored programs, and the adoption of uniform processes at the institutions participating in the demonstration?

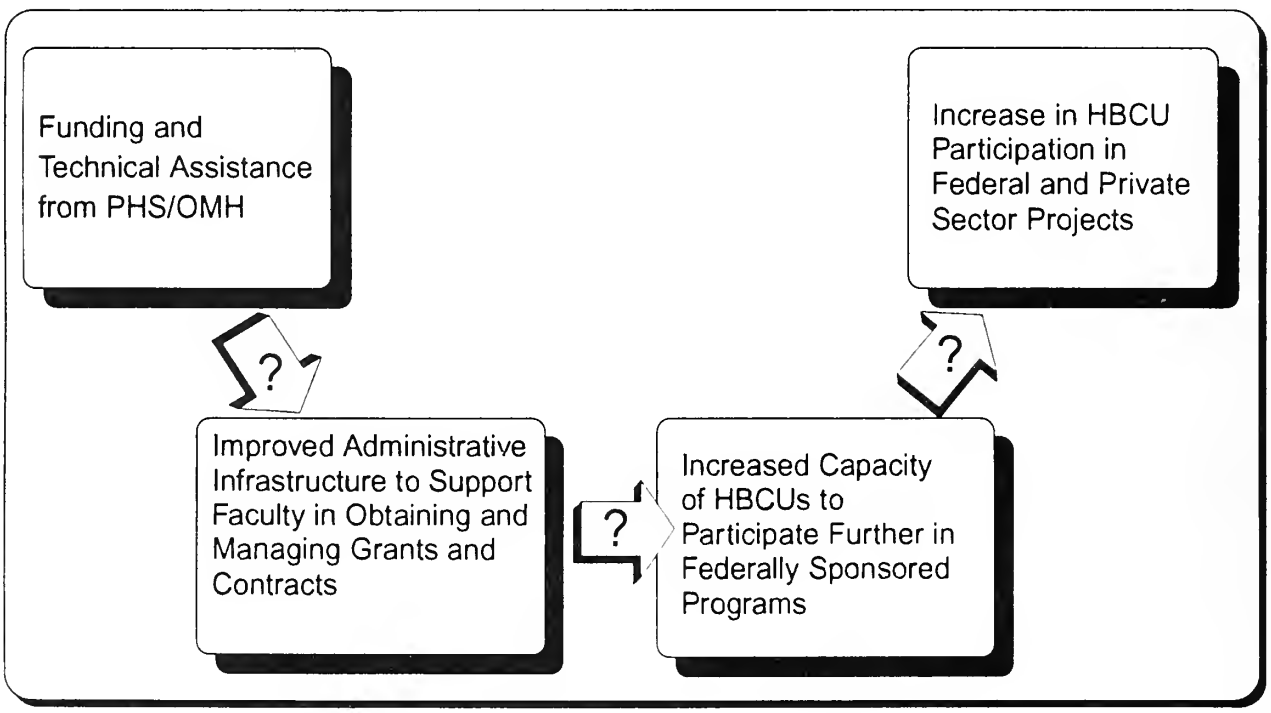
2) Did the program result in increased funding of research, training, evaluation, and service projects at the institutions participating in the demonstration?

3) Did the program result in increased or enhanced activities in research, training, evaluation, and services at the institutions participating in the demonstration?

4) Were the cooperative efforts (technical assistance) of the Federal and non-Federal partners instrumental in the accomplishment of program goals?

Figure 1

Basic Hypotheses Established by PHS to Be Tested by the Demonstration Project



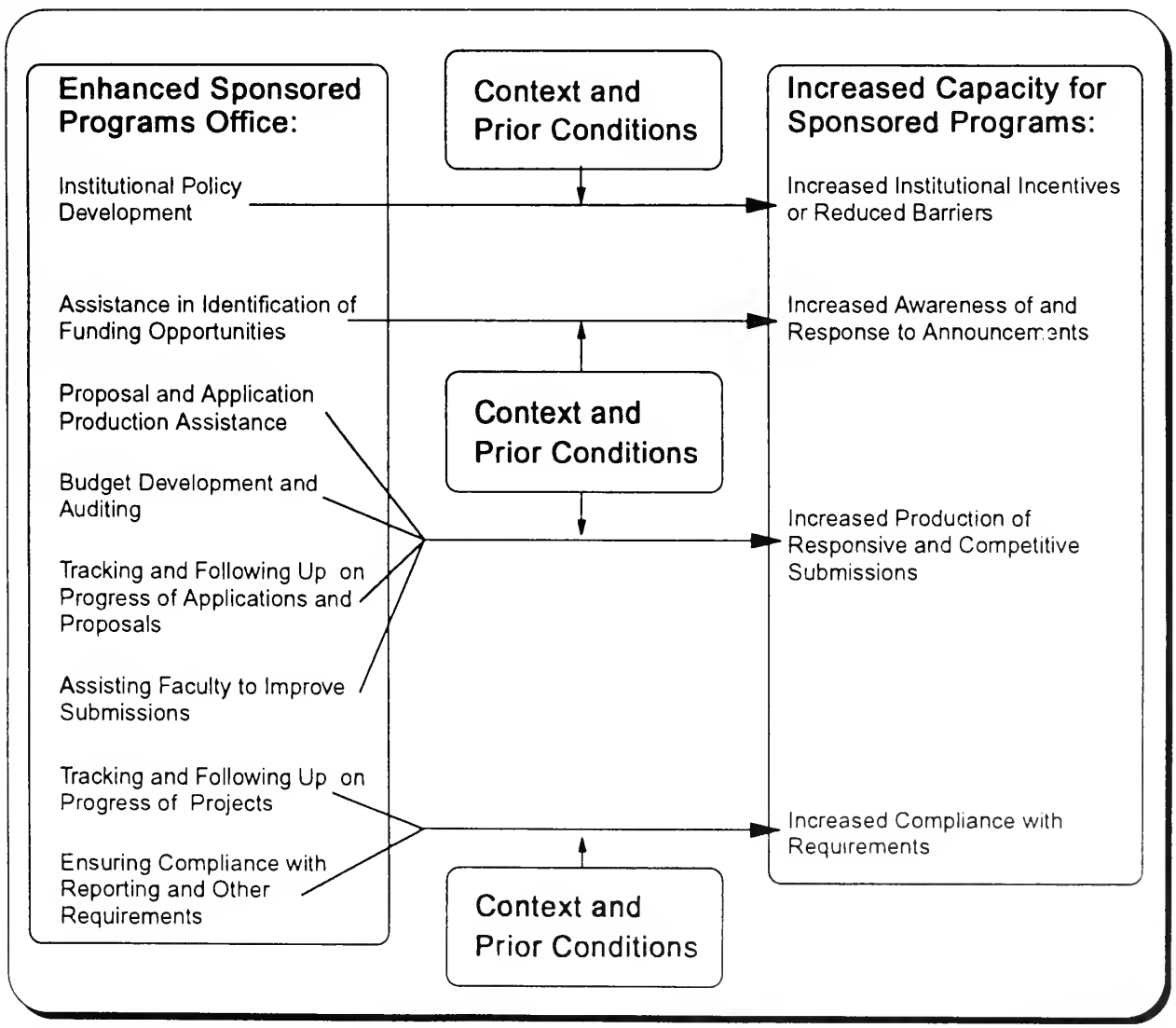
The original program announcement is even more specific about the questions that are to be answered by the HBCU demonstration projects, relating to the extent to which the program succeeded in establishing, developing, or promoting specific forms of administrative support that were anticipated in the design of the program by PHS. These program design issues in the original program announcement are easily

translated into the following evaluation questions, numbered as sub-components of the previously stated four questions presented in the Scope of Work for this evaluation:

1) Did the program result in the establishment of offices of sponsored programs, and the adoption of uniform processes at the institutions participating in the demonstration?

1(a) Does the sponsored programs office (SPO) serve as the key advisor to institutional officials in the identification and development of institutional capabilities in scientific, technical, and service delivery activities?

Figure 2
Specific Impacts to Be Tested by the Demonstration Program



1(b) Does the SPO assist institutional staff in developing writing skills and ability to develop applications for support?

1(c) Does the SPO identify and assist key administrators to develop institutional policy to conform with Federal and other sponsor requirements?

1(d) Does the SPO identify new and innovative methods of obtaining support for institutional activities?

1(e) Does the SPO assist in the development of publications including writing narratives, preparing proposed budgets, providing support documents and required certifications?

1(f) Does the SPO participate in the development of project cost rates and audit activities?

1(g) Does the SPO follow up on applications and provide a continuing interface between the institution and the funding agency?

1(h) Does the SPO assist the Principal Investigator (PI) in applications which are disapproved, returned, or approved but not funded, to determine what the weaknesses are and how best they might be overcome in subsequent revisions or resubmissions?

1(i) Does the SPO assist the PI in obtaining the space, personnel, release time, or other resources required, in a timely manner, to conduct a funded project?

1(j) Does the SPO monitor the Activities on the supported projects to ensure that appropriate progress is being made, problems are being addressed, and proper contacts are being maintained with the funding agency?

1(k) Does the SPO ensure that all reporting requirements are adhered to by the institution and the PI, including financial status reports and programmatic reports?

2) Did the program result in increased funding of research, training, evaluation, and service projects at the institutions participating in the demonstration?

2(a) Has the institution increased the amount of the dollar awards received through grants and contracts, since the implementation of the program?

2(b) Has the SPO development clearly effected an increase in the dollar awards received through grants and contracts?

3) Did the program result in increased or enhanced activities in research, training, evaluation, and services at the institutions participating in the demonstration?

3(a) Has the institution increased the number and variety of activities supported through grants and contracts, since the implementation of the program?

3(b) Has the SPO development clearly effected an increase in the number and variety of activities supported through grants and contracts?

4) Were the cooperative efforts (technical assistance) of the Federal and non-Federal partners instrumental in the accomplishment of program goals?

4(a) In what ways were the program participants affected by the technical assistance provided by external consultants provided by the program?

4(b) Did the program participants receive the types of technical assistance that they needed from external consultants provided by the program?

4(c) In what ways were the program participants affected by the technical assistance provided by OMH personnel as part of the program?

4(d) Did the program participants receive the types of technical assistance that they needed from OMH personnel associated with the program?

The program model, as presented in the original program announcement, also cites institutional context variables and discusses them as potentially important determinants of program success. These contextual concerns imply the need to ask a fifth and a sixth question about the overall success of the program:

5) In what ways was the program success dependent on contextual variables at each institution?

6) Did the program produce lasting change and sufficient momentum to ensure the long-term survival of a fully functional SPO?

Such context issues translate into the following related evaluation questions:

5) ***In what ways was the program success dependent on contextual variables at each institution?***

5(a) Is there top-level administrative commitment to the development of an SPO?

5(b) Are faculty and staff committed to the pursuit of research and service activities through external support mechanisms?

5(c) How was the success of SPO development affected by the types of institutional needs cited by each program participant in their program applications?

5(d) How was the development of the SPO affected by the level of prior institutional involvement in seeking and obtaining external program funding?

5(e) How was the development of the SPO affected by the prior level of staffing devoted to specific functions of sponsored programs administration?

5(f) How was the development of the SPO affected by the types of facilities and support services that each institution could apply to the capacity building effort?

5(g) How was the development of the SPO affected by the specific types of activities pursued by each institution to address their specific needs?

5(h) How was the development of the SPO affected by the organization and day-to-day functions of the sponsored programs office?

6) ***Did the program produce lasting change and sufficient momentum to ensure the long-term survival of a fully functional SPO?***

6(a) How was the development of the SPO affected by the strategies by which the office was to be institutionalized for continuation beyond the PHS/OMH cooperative agreement period?

6(b) To what degree, and by what means, was the institution prepared to continue the functioning of the SPO after the end of the cooperative agreement?

Clearly, this listing of evaluation questions suggests that the demonstration project was conceived with the aim of assessing a complex interaction of prior conditions and implemented strategies for improving sponsored programs administration at the participating HBCUs. The ultimate degree of program success might be determined only long after the *HBCU Capacity Building Program* has ended, at which point it will be possible to see if there is sustained growth in institutional research capacity, the number of proposals and applications submitted and/or funded, and the participation of the four HBCUs in more programs within DHHS. At this time, it is possible to review only initial indicators related to such long-term questions raised by OMH.

E. PURPOSE AND STRUCTURE OF THE FINAL REPORT

This Final Report is intended to document the understanding that has been achieved, as gained through this evaluation, regarding the extent to which the *HBCU Capacity Building Program* has been effective in meeting its stated aims. As a matter of context, the collection of data for the evaluation began near the end of the fourth, and final, year of the cooperative agreement awarded to the four HBCU participants, and extended about four months after the scheduled conclusion of the awards. Thus, the understanding of the program, which is presented in the findings from the evaluation, is based on the analysis of data collected shortly after official termination of the award to the HBCU grant recipients. Given the exploratory nature of the program, this report focuses primarily on answering the questions and testing the basic hypotheses initially articulated about the likely effectiveness of this form of capacity building at HBCUs. In order to address the evaluation questions fully and to test the basic program model, it was necessary to gather data that pertain directly to the issues or variables of interest to PHS and OMH. In turn, the analytical methods of this evaluation were chosen to be consistent with the questions that were raised by PHS in developing the capacity building effort. Accordingly, the remaining sections of this

report describe the processes by which appropriate data were systematically gathered, the methods by which those data have been analyzed, and the findings that are evident in the available data regarding the *HBCU Capacity Building Program*.

II. PROJECT IMPLEMENTATION AND METHODOLOGY

A. OVERVIEW OF THE APPROACH TO THE PROGRAM EVALUATION

The technical approach that was developed by *Expand Associates,* to conduct the *Evaluation of the HBCU Capacity Building Program,* was intended to provide an appropriate and efficient path toward completion of the project as desired by OMH. The approach was also designed to be consistent with the project scope, time frame, and two-stage operational structure established by OMH. Accordingly, *Expand Associates* organized the conduct of the evaluation effort into the following five distinct, but interrelated operational phases, within the *two stages* of the project, as follows:

- **Stage I**
  - *Phase I: Planning*;
  - *Phase II: Initial Data Collection*;
  - *Phase III: HBCU Site Visits and Final Data Collection*; and
- **Stage II**
  - *Phase IV: Data Analysis*; and
  - *Phase V: Final Report.*

In the *first phase* of the approach, implemented over a four-week period, the evaluation team focused on organizing and planning the specific parameters and logistics for implementing the project. Accordingly, this first phase began with an initial project meeting between the Project Officer and other OMH officials, and the key project staff from *Expand Associates.* The meeting facilitated a mutual understanding regarding the intent of the project aims and tasks. This included a clarification about the contents of the *Work Plan*, which was especially vital to the project, in that it served

to specify the data collection and analysis procedures, for use in implementing the research methodology. Thus, Phase I was important in laying the groundwork for smooth implementation of Phases II through V of the evaluation.

In *Phase II*, which took place over a 12-week period, three major activities occurred: (1) review of the baseline and project monitoring data available from the files of OMH, (2) gathering of interview data regarding the activities and findings of technical assistance providers and federal administrators of the capacity building program, and (3) collection of primary and secondary data from the four HBCU program participants. Prior to any specific requests for information from the HBCUs, a *Letter of Introduction* was prepared and sent by the Director of OMH to each program participant, presenting the purpose of the study and the intent of the collection effort. Standardized data collection instruments, were also developed during Phase II, for use in the systematic collection of pertinent primary and secondary data from the HBCU program participants.

Phase III, which spanned 10 weeks, began with a focus on the analysis of the OMH file data, as well as data collected by mail from the four HBCU participants. Preliminary analysis of these data focused on quantitative and categorical information, which was used to guide the production of site visit protocols. The major emphasis of Phase III was the actual conduct of site visits, during which the preliminary data and findings were confirmed, clarified, and augmented through the gathering of interview data and archival materials. Each site visit was documented in a *Preliminary Site Visit Report*. Phase III concluded with the analysis of quantitative and categorical data, along with some of the most notable qualitative information from the interview data, as ultimately presented in the Mid-Project Report .

Phase IV of the project was a 12-week process of data analysis. The analytic effort followed three complementary and integrated paths:

(1) Development of a detailed, qualitative case history regarding the context, implementation, and outcomes of the capacity building program at each of the four HBCUs;

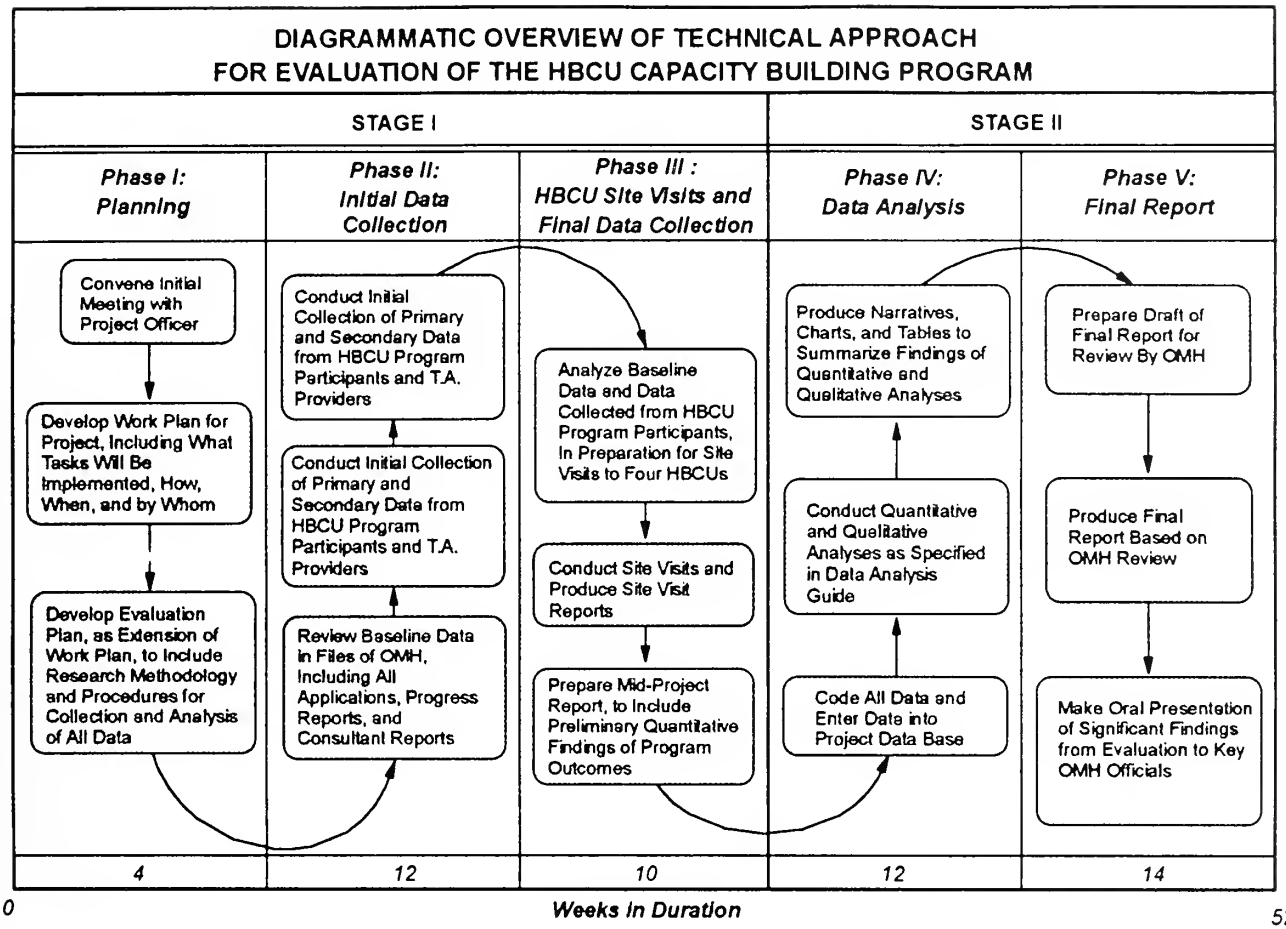
(2) Refinement and expansion of the quantitative analyses of program implementation and outcomes; and

(3) Application of comparative case study methods of sociologist Charles Ragin, combining qualitative and quantitative data, aimed at identifying factors that appear to support or hinder the success of this type of capacity building.

Phase V, as the concluding phase of the project, was a 14-week effort aimed largely at producing this *Evaluation Report*. The project concluded with an oral report to OMH officials regarding the evaluation process and findings, presented in November of 1997.

A diagrammatic overview of the Technical Approach for all five phases of the evaluation project appears on the following page as Figure 3.

Figure 3



B. PREPARATION FOR DATA COLLECTION

1. Developing the *Data Collection Guide*

As part of the production of the Work Plan, a *Data Collection Guide* was developed to serve as a step-by-step manual for gathering the necessary data for evaluation of the *HBCU Capacity Building Program.* This guide addressed the processes to be followed in identifying data sources, notifying those sources of the intent of the evaluation team to gather data, collecting data from the identified sources, and storing the collected data for later use in analysis. The guide was based on the

procedures developed by *Expand Associates*, in consultation with OMH. The *Data Collection Guide* also addressed the tentative schedule of site visits and presented draft data collection materials.

2. Identification of Data Sources

The evaluation required the gathering of data from multiple sources. In the absence of fourth-year reports from the four HBCUs, it was particularly important to engage in on-site observation of conditions at the end of the capacity building effort. The following sources were identified for particular data collection purposes:

- OMH files, containing annual progress reports and financial reports from the HBCUs, site visit reports, and correspondence between PHS/OMH and the HBCUs;
- Personnel who served as the PHS or OMH Program Officer for the capacity building effort, for their personnel knowledge of program intent, program implementation, and experiences in visiting each HBCU and interacting with HBCU personnel;
- Technical assistance providers, for their insights into the processes and impacts of delivering technical assistance to the HBCUs; and
- HBCU personnel, including the President, other top administrators with direct or indirect authority over the SPO, the Director and staff of the SPO, and faculty who have interacted with the SPO, regarding their respective experiences with the development, operation, and utilization of the SPO.

3. Developing the Data Collection Materials

During development of the *Evaluation Work Plan*, the project staff prepared the following data collection materials:

- *Archival Data Review Form*, to guide the process of determining the contents and evaluative importance of items within the OMH files;

- Draft *Site Visit Agenda*, specifying the titles and levels of individuals to be interviewed and the time to be spent in reviewing records of the sponsored programs office during the visit to each HBCU; and

- A draft *Site Visit Protocol*, covering a standard set of the types of data to be sought from each of the four institutions, through interview questions and through direct observation.

These draft instruments were produced based on an initial review of the OMH requirements for conduct of the evaluation study. Prior to finalizing the instruments, the evaluation team developed a preliminary draft of a formal *logic model* of the *HBCU Capacity Building Program*, for use in the identification of key variables and the refinement of data collection instruments.

In evaluation research involving case study methods, the logic model is an extremely valuable tool for guiding the design of the evaluation, as it captures the underlying rationale of the program. The logic model is typically presented in a graphic form which demonstrates the apparent, logical, and theoretically causal links among the following elements of the program:

- *Assumptions* within the program, regarding the needs that are to be addressed by program interventions, and the efficacy of the chosen interventions in the targeted situation;

- *Actions* taken as part of the planned intervention, which is normally intended to yield particular outcomes;

- *Immediate Outcomes* that might reasonably be expected to occur as a direct result of the actions taken;

- *Intermediate Outcomes*, if any, which might be secondary effects of the action and its immediate outcomes; and

- *Final Outcomes*, which are typically the intended goals of the action, but might logically include the consideration of unanticipated positive and negative effects of the program.

By specifying these elements of the program in a logic model, it becomes possible to conceptualize the causal relationships by which a specific assumption can be associated with a chosen action, which is, in turn, associated with a particular outcome or set of outcomes. Once these conceptual links are established, the evaluation methods follow relatively easily, as it becomes clear what assumptions must be confirmed, what actions or processes must be gauged, what outcomes must be monitored, and what types of relationships must be explored and tested to verify or debunk the apparent logic of the program and its outcomes. The resulting model is presented and discussed in Section III of this report.

Based on the preliminary logic model, a *Data Summary Form* was developed to gather simple, categorical and quantitative information by mail from each HBCU. Also, the *Site Visit Protocol* was revised to focus on the more complex issues that could not be addressed in the data gathered by mail. Prior to each site visit, the *Revised Site Visit Protocol* was further customized to account for specific information already gathered regarding each institution. The customization had the following aims:

- To direct particular questions to the most appropriate individuals at each institution, based on the HBCU's organizational structure;
- To ensure that each inquiry would be pertinent to the responsibilities of particular categories of persons to be interviewed, which included faculty, SPO staff, and top-level administrators;
- To follow up on specific issues that were unclear, missing, or in need of elaboration in the completed *Data Summary Form* from each institution, without addressing those data in a redundant fashion; and
- To address the unique circumstances, prior conditions, needs, objectives, and program-related activities and events at each institution, as identified in OMH files or other available data.

C. COLLECTION OF DATA FOR THE PROJECT

1. Collection of Data by Mail and by Telephone

a. Gathering Baseline Data from OMH Files

One outcome of the Initial Project Meeting was the establishment of a process for reviewing OMH program files. This data gathering process was conducted in two steps:

1) Two members of the evaluation team used the previously developed *Archival Review Forms* to note the contents of the OMH program files, and to identify documents which should be copied for use in coding and analyzing substantive data;

2) The evaluation team assembled archive files for the evaluation, including copies of pertinent materials found in the OMH files.

During the review of file materials, two areas of concern emerged:

- The four participating HBCUs differed in the thoroughness of their record keeping on key measures, such as the number of proposals submitted in each year of the cooperative agreement, partly because there had been no specific uniform record keeping requirements in the cooperative agreement; and

- None of the participating HBCUs had established consistent systems for tracking proposals and projects until the later years of the program.

Clearly, these facts posed a challenge to the intent of OMH and the evaluation team to use such quantitative data as explicit indicators of program success across all participating HBCUs. As a result, it was not possible to conduct conventional pre-program versus post-program analyses of data regarding proposal production and proposal success rates. This issue is addressed in more detail in Section III of this report.

b. Initiating Contacts and Gathering Data from HBCUs and Technical Assistance Providers

In order to facilitate cooperation from non-OMH data sources, initial contact letters were prepared and sent to each of the four HBCUs and to both technical assistance providers. Four types of letters were drafted and distributed:

1) A letter from the Director of OMH to the HBCUs;

2) A letter from *Expand Associates* to the HBCUs;

3) A letter from the Director of OMH to the technical assistance (TA) providers; and

4) A letter from *Expand Associates* to the TA providers.

Telephone interviews were conducted with the technical assistance providers prior to the collection of data from the four HBCUs. These interviews were structured by the use of interview protocols that focused attention on the amounts, purposes, mechanisms, and results of technical assistance, as well as the provider's insights about the conditions and progress at each HBCU over the four-year program. Similarly, the two persons who had served as Federal Program Officers for the *HBCU Capacity Building Program* were interviewed to provide more background data that would enhance the conduct of evaluation site visits to the HBCUs.

c. Collection of Primary Data by Mail and by Telephone

The process of data collection from the HBCUs began with the following actions:

- Telephone contact with each HBCU regarding the structure of the data collection process and the scheduling of the site visit to each institution;

- Mailing of the *Data Summary Form* to the HBCUs, with an explanatory cover letter; and

- Follow-up telephone contacts to encourage response to the *Data Summary Form* and to determine the status of site visit arrangements.

2. Collection of Data by Site Visits

The four site visits were conducted along the schedule that was developed during the initial contacts with the HBCUs, as follows:

- Saint Paul's College, January 15 and 16, 1997;
- Delaware State University, January 29 and 30, 1997;
- University of Maryland Eastern Shore, February 12 and 13, 1997; and
- Savannah State University, February 26 and 27, 1997.

This schedule permitted time between site visits for initial processing of data from each just-completed site visit, as well as time for review of background data and final customization of the protocol for each upcoming site visit.

Following each site visit, the evaluation team produced a *Preliminary Site Visit Report* to serve as an interim record of the types of data collected and preliminary findings. Each of these reports present an overview of the site visit process as it developed at each institution. The reports also contain basic qualitative and quantitative findings, minimally analyzed, for use in the later development of comprehensive case histories.

D. METHODS OF ANALYSIS OF THE COLLECTED DATA

Data analysis was conducted in three stages. In the first stage, the evaluation team compiled and tabulated the quantitative and categorical data pertaining to the capacity building processes and outcomes that were recorded for each of the four

HBCUs. Thus, this first stage of analysis consisted of the development of frequency tables and bar charts to summarize the following data:

- Amounts of PHS/OMH funding received by each HBCU for capacity building each year, by expense category;
- Levels of SPO staffing at each HBCU;
- Number of computers used for sponsored programs administration, before and after capacity building;
- Relevant policy issues addressed at each HBCU;
- Number of competitive awards received by each HBCU during each year of capacity building;
- Dollar amount of awards received by each HBCU during each year of capacity building;
- Number of unfunded submissions made by each HBCU during each year of capacity building;
- Dollar amount of unfunded submissions made by each HBCU during each year of capacity building;
- Dollar amount of unfunded submissions still pending at the time of data collection;
- Number of faculty receiving awards as the Principal Investigator (PI) during each year of capacity building;
- Number of new PIs recorded at each HBCU during each year of capacity building; and
- Number of academic departments represented by PIs receiving awards at each HBCU during each year of capacity building.

The second stage of data analysis involved a thorough review of all collected data for the purpose of tracing the history of the sponsored programs administration, PHS/OMH capacity building, apparent program impacts, and surrounding contextual

factors. These issues were organized into narrative case histories, systematically structured to ensure their comparability.

The third stage of data analysis involved the application, as earlier indicated, of Charles Ragin's *comparative method* of case analysis for the construction of several models of hypothesized causes and effects. The logic of the *comparative method* is especially appropriate for recognizing explicit intersections of characteristics, such as the past extent of sponsored programs administration combined with the apparent commitment of the institution to research, and determining whether such combinations were accompanied by particular outcomes or impacts at their respective institutions.

In its pure form, the *comparative method* involves the consideration of whole entities, with the interactions of their known characteristics recorded in truth tables based on whether each characteristic and each combination is present or absent. In the current evaluation, these characteristics can be prior conditions, program elements, or measured performance related to the acquisition and management of sponsored programs. The binary labeling of these characteristics as *present versus absent* permits the application of Boolean algebraic analysis of the associations among the case characteristics. Given the many potential characteristics that might be used to describe any given case in its entirety, it is notable that the *comparative method* can be adapted and supplemented in meaningful and useful ways by conducting simpler analyses of the most relevant characteristics. In the current evaluation, such an adaptation was used to focus on the characteristics on which the cases clearly vary, rather than formally comparing the whole cases.

Thus, the evaluation team conducted a series of specific analyses and logic tables showing the variations among the four HBCU cases, for those variables on which the HBCUs could be directly compared. These relatively simple models of the documented program structure, the measurable successes at each HBCU, and the

documented characteristics of the HBCUs, as they functioned before and after their participation in the DHHS sponsored *HBCU Capacity Building Program*, were based directly on the preliminary logic model that was developed as an overall description of the capacity building effort.

The sections that follow present the findings from all three stages of the analysis: Section III presents basic findings from the quantitative and categorical review of the capacity building, as it occurred in each of the four HBCUs; Section IV presents each of the four case histories; and Section V presents the application of the *comparative method*, along with discussion of findings that are evident from the logic tables, which were developed to illustrate the systematic case comparisons.

III. QUANTITATIVE AND CATEGORICAL ANALYSES AND FINDINGS

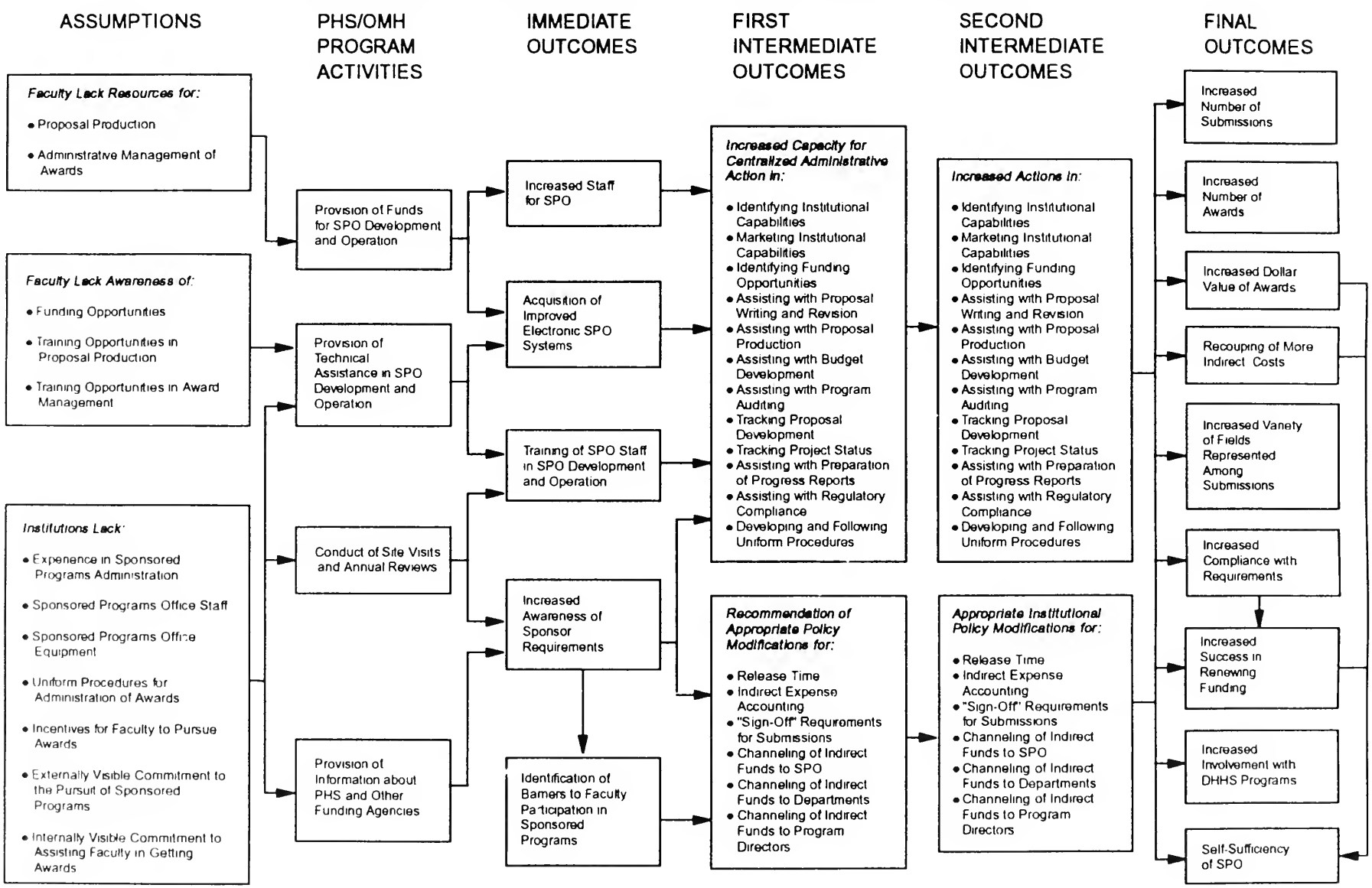
A. DEVELOPMENT OF A PRELIMINARY MODEL OF PROGRAM FUNCTIONING

As stated earlier, the evaluation team developed a logic model of the *HBCU Capacity Building Program*, in order to maximize the logical and theoretical consistency of the data collection and analysis. This model, as shown in Figure 4 on the following page, was developed based on the original PHS program announcement, as well as the evaluation questions and parameters established by OMH for the current evaluation effort. The purpose of such a model is to identify the threads of logic that give coherence to the capacity building program as it was implemented by PHS and OMH. The important components in this chain of logic, as defined previously, are as follows:

- Explicit assumptions;
- Program activities;
- Immediate outcomes;
- Intermediate outcomes; and
- Final outcomes.

Having identified these various elements of the logic model, it is possible to devise measures which relate both to the specific elements and to the expected or logical relationships among those elements. The following sub-section addresses the measures that were derived from the logic model for the evaluation of the *HBCU Capacity Building Program.*

Figure 4
Preliminary Model of the Underlying Logic of the HBCU Capacity Building Program



B. MAJOR QUANTITATIVE AND CATEGORICAL MEASURES OF INTEREST IN THE EVALUATION

Most of the major quantitative and categorical measures utilized in the evaluation pertain to measurable levels of program inputs and outcomes. They were selected to yield a basic, concrete description of the program implementation and results, to the extent that results were measurable by February of 1997. These measures were not expected to address the details of difficulties encountered during implementation or contextual influences on the program outcomes.

The categorical and quantitative analysis was facilitated by the fact that the capacity building program activities, as implemented by PHS and OMH, were relatively straightforward. Program guidelines were established by PHS as review criteria for institutions to consider in developing their proposals, and PHS and OMH provided funds, monitoring, and technical assistance to support each HBCU in implementing its proposed project. Otherwise, each HBCU was given considerable latitude in how to develop an SPO that would meet the particular needs of the institution. The following categorical and quantitative measures were of interest for recognizing the degree of variation among the program activities and outcomes related to PHS/OMH support at each of the four HBCUs:

- Level of funding received by each HBCU for staff, equipment, supplies, and other expenses associated with establishing and maintaining an SPO;
- Frequency and purpose of contacts between the Federal Project Officer for the cooperative agreement and each HBCU;
- Frequency and purpose of contacts between non-Federal technical assistance (TA) providers and the HBCU; and
- Frequency of events designed to increase HBCU awareness of funding opportunities within PHS and other agencies.

In addition to these Federally initiated components of the program, the following major HBCU-driven components are easily gauged in a quantitative or categorical manner:

- Number and roles of SPO staff members;
- Number and types of computers used by the SPO;
- Number and types of training events in which SPO staff participated; and
- Types of policy-oriented strategies used by the SPO to overcome barriers to sponsored programs participation at each HBCU.

Final outcomes of interest in a basic quantitative review of the program include the following key indicators of program success:

- *Number of* grant applications and/or contract *proposals submitted* each year by each HBCU;
- *Number of* grant and/or contract *awards received* each year by each HBCU;
- *Dollar amount of* grant and/or contract *awards received* each year by each HBCU;
- *Number of faculty directing* grant and/or contract *awards* at each HBCU, relative to the total number of faculty; and
- *Number and type of academic departments* in which sponsored program *awards* were received each year by each HBCU.

Taken together, the quantifiable indicators listed above are very important because they also have implications for the self-sufficiency of the SPO and the viability of the institution. Data for these listed quantitative and categorical summaries are presented in the sub-sections that follow.

C. SUMMARY OF QUANTITATIVE AND CATEGORICAL DATA

1. Federal Components of the Program

Interviews at the four HBCUs suggested that the most significant element of the program was the funding from PHS and OMH, which facilitated the initial staffing and equipping of the SPO. The average annual funding for each HBCU ranged from $154,831 per year to $239,373 per year for four years. Tables 1 through 4 summarize the PHS/OMH financial support for the capacity building program at each of the HBCUs, by year and by expense category. In Figure 5, a comparison is made, by participating HBCU, of how these funds were expended in select operational cost categories. A comparison of the amounts received by each HBCU, and the distribution of these amounts into the typical broad cost categories for a project, is presented in Figure 6. It is evident from these data that there were substantial differences in the amount of funding received by the four HBCUs. However, those differences are almost entirely attributable to differences in salary support requested, and associated fringe benefits and indirect expenses. To varying degrees, HBCUs requested support for all SPO staff, or they chose to include SPO staff salaries as part of the institution's contribution to the project. In general, it appears that the four HBCUs requested and received comparable support for equipment, supplies, travel, consultants, and other non-salary funding.

The second important contribution of PHS and OMH, according to the interview data from program officials and HBCU administrators, was the technical assistance and other guidance arranged by PHS and OMH. These elements of the program, and the available data regarding them, do not lend themselves to quantitative discussion. The institutions received somewhat varying amounts of attention from PHS and OMH, as well as from the federally contracted TA providers, largely in accordance with their apparent or expressed needs for guidance, as discussed in the case histories in Section IV of this report.

Table 1

DELAWARE STATE UNIVERSITY PROGRAM FUNDS RECEIVED FROM PHS/OMH, BY YEAR AND BY EXPENSE CATEGORY

EXPENSE CATEGORY	YEAR OF THE HBCU CAPACITY BUILDING PROGRAM				
	Year 1	Year 2	Year 3	Year 4	Total
Salaries and Wages	$64,360	$79,023	$70,826	$51,085	$265,294
Fringe Benefits	$15,494	$20,086	$16,471	$11,957	$64,008
Consultants	$0	$0	$0	$0	$0
Equipment	$3,934	$27,352	$0	$0	$31,286
Supplies	$29,160	$5,888	$8,825	$5,476	$49,349
Travel	$3,475	$14,274	$10,233	$12,822	$40,804
Renovations	$0	$0	$0	$0	$0
Membership Fees	$525	$3,995	$4,470	$4,920	$13,910
Other Services	$7,135	$12,650	$16,002	$12,310	$48,097
Direct Expense Award Total	$124,083	$163,268	$127,027	$98,570	$512,948
Indirect Expense Award	$63,883	$63,218	$45,382	$33,716	$206,199
Nominal Award Total	$187,966	$226,486	$172,409	$132,286	$719,147
Amount Carried from Prior Year	N/A	$33,693	$17,187	$0	$50,880
Actual Award Total	$187,966	$192,793	$155,222	$132,286	$668,267

Table 2

SAINT PAUL'S COLLEGE PROGRAM FUNDS
RECEIVED FROM PHS/OMH,
BY YEAR AND BY EXPENSE CATEGORY

EXPENSE CATEGORY	YEAR OF THE HBCU CAPACITY BUILDING PROGRAM				
	Year 1	Year 2	Year 3	Year 4	Total
Salaries and Wages	$111,800	$180,795	$152,840	$157,103	$602,538
Fringe Benefits	$18,335	$25,922	$21,256	$21,968	$87,481
Consultants	$0	$0	$0	$0	$0
Equipment	$19,616	$11,937	$0	$0	$31,553
Supplies	$13,000	$6,000	$4,000	$4,000	$27,000
Travel	$5,000	$12,000	$6,000	$10,000	$33,000
Renovations	$0	$0	$0	$0	$0
Membership Fees	$0	$0	$0	$0	$0
Other Services	$7,200	$7,590	$7,000	$5,000	$26,790
Direct Expense Award Total	$174,951	$244,244	$191,096	$198,071	$808,362
Indirect Expense Award	$17,495	$22,537	$87,048	$89,536	$216,616
Nominal Award Total	$192,446	$266,781	$278,144	$287,607	$1,024,978
Amount Carried from Prior Year	N/A	$57,089	$10,397	$0	$67,486
Actual Award Total	$192,446	$209,692	$267,747	$287,607	$957,492

Table 3

SAVANNAH STATE UNIVERSITY PROGRAM FUNDS
RECEIVED FROM PHS/OMH,
BY YEAR AND BY EXPENSE CATEGORY

EXPENSE CATEGORY	YEAR OF THE HBCU CAPACITY BUILDING PROGRAM				
	Year 1	Year 2	Year 3	Year 4	Total
Salaries and Wages	$103,406	$109,109	$125,950	$129,263	$467,728
Fringe Benefits	$32,056	$34,915	$40,304	$41,364	$148,639
Consultants	$0	$0	$0	$14,985	$14,985
Equipment	$0	$23,878	$0	$0	$23,878
Supplies	$500	$4,215	$500	$1,000	$6,215
Travel	$5,000	$8,532	$8,118	$10,000	$31,650
Renovations	$0	$0	$0	$0	$0
Membership Fees	$0	$3,000	$0	$0	$3000
Other Services	$0	$1,000	$2,000	$11,000	$14,000
Direct Expense Award Total	$140,962	$184,649	$176,872	$207,612	$710,095
Indirect Expense Award	$67,214	$63,283	$73,051	$74,973	$278,521
Nominal Award Total	$208,176	$247,932	$249,923	$282,585	$988,616
Amount Carried from Prior Year	N/A	$19,093	$0	$30,985	$50,078
Actual Award Total	$208,176	$228,839	$249,923	$251,600	$938,538

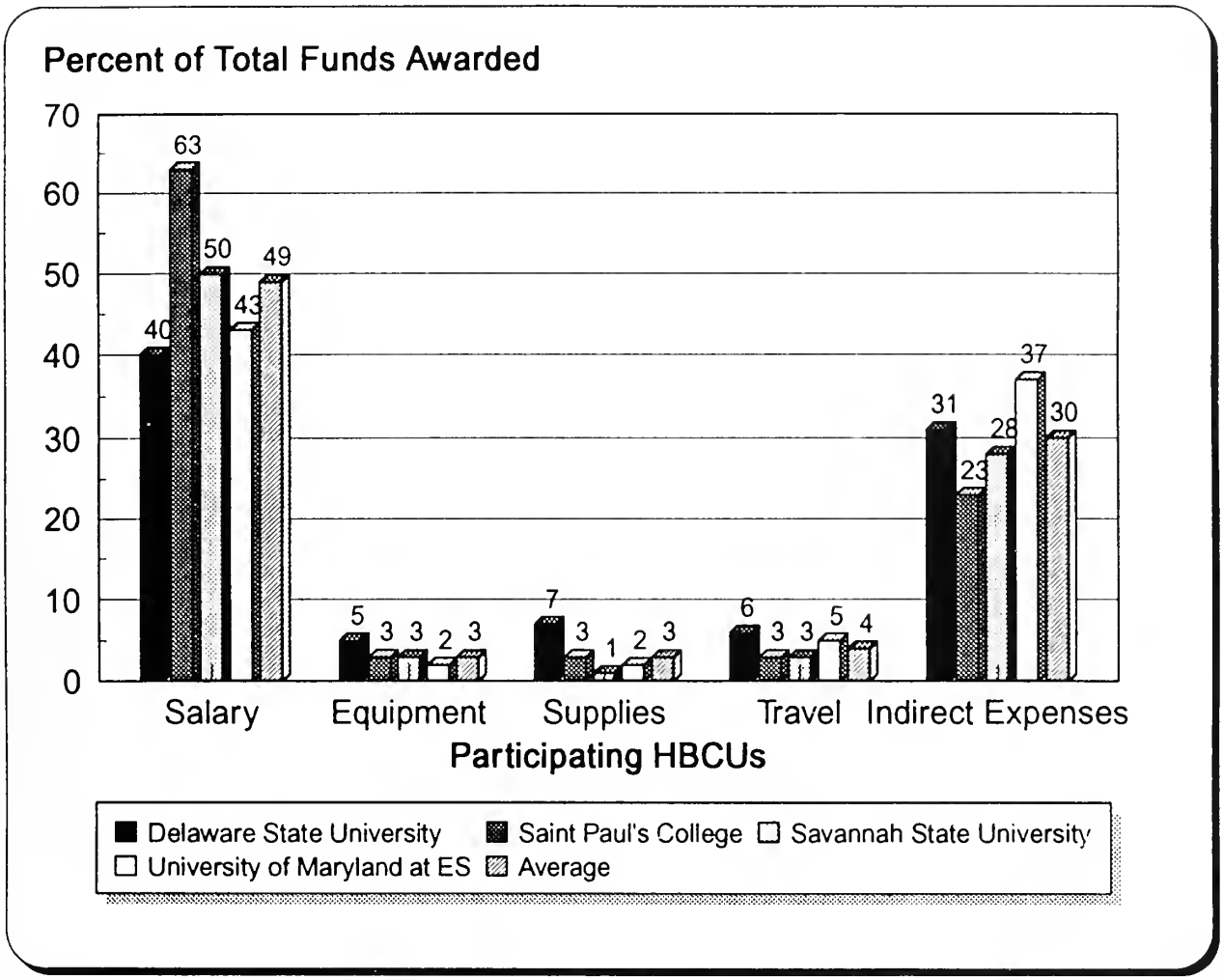
Table 4

UNIVERSITY OF MARYLAND EASTERN SHORE PROGRAM FUNDS RECEIVED FROM PHS/OMH, BY YEAR AND BY EXPENSE CATEGORY

EXPENSE CATEGORY	YEAR OF THE HBCU CAPACITY BUILDING PROGRAM				
	Year 1	Year 2	Year 3	Year 4	Total
Salaries and Wages	$62,500	$54,170	$70,250	$73,761	$260,681
Fringe Benefits	$21,250	$33,768	$21,600	$22,680	$99,298
Consultants	$0	$0	$0	$0	$0
Equipment	$0	$2,550	$2,200	$10,250	$15,000
Supplies	$0	$8,500	$1,950	$2,400	$12,850
Travel	$4,000	$7,500	$9,400	$8,250	$29,150
Renovations	$0	$0	$0	$0	$0
Membership Fees	$0	$0	$0	$0	$0
Other Services	$16,550	$0	$3,900	$4,260	$24,710
Direct Expense Award Total	$104,300	$106,488	$109,300	$121,601	$441,689
Indirect Expense Award	$61,975	$52,763	$55,110	$57,865	$227,713
Nominal Award Total	$166,275	$159,251	$164,410	$179,466	$669,402
Amount Carried from Prior Year	N/A	$0	$1,150	8,860	$50,078
Actual Award Total	$166,275	$159,251	$163,260	$170,606	$619,324

Figure 5

Percent Comparison by HBCU of Select Expenditures From Total Funds Awarded



As illustrated in Figure 5, approximately half of the grant funds were used by the participating HBCUs to support salaries of SPO staff. Ranging from a high of 63 percent at St. Paul's College to the low of 40 percent at Delaware State University, the average percent expended on salary by all schools was 49 percent of the total funds received. It should be noted that this high proportion of expenditures is congruent with the HBCUs' expressed need for salary support to establish and operate a sponsored programs office.

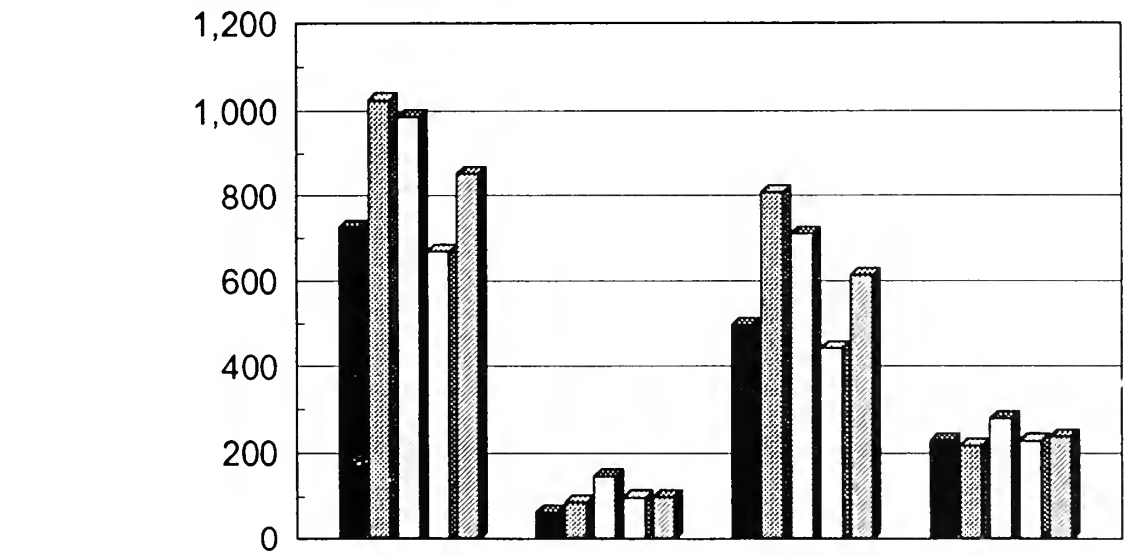
The second highest percentage of expenditures outlayed from the award by the participating HBCUs was in the indirect expense category. This is an extremely important category to the HBCUs, in that these funds can be used for allowable operating costs of the institutions. Although such general operating costs of the institution typically include many expenses not necessarily associated with the capacity building program, institutions normally depend heavily on indirect expense recovery to support the operation of an SPO. The formula by which each of the participating HBCUs allocated funds from the indirect expense category of the capacity building award, as well as from other grants and contracts, is discussed in each case history in Section IV. It is important to note, however, that the capacity building program was very valuable as a catalyst for Saint Paul's College to negotiate a government-wide indirect cost rate, which the institution had not done before.

With respect to equipment, supplies, and travel, Figure 5 indicates that a modest percentage of the total funds, over the four year period, was expended for these categories. It is interesting to note that, for the most part, all of the participating HBCUs spent about the same percentage of their total funds, received, for the ongoing burden of supplies as they did for equipment. Based on detailed financial records of the SPOs, the high cost of supplies appears to be related to the ongoing need to update computer software, hardware, and subscriptions for internet access.

The total amount of funds received by each participating HBCU was varied, as indicated earlier, and was based partly on the budget that each HBCU submitted and partly on the availability of PHS resources. Figure 6 indicates that the average total amount of funds received by these schools, over the four year period, was $798K, ranging from a high of $957K by Saint Paul's College to a low of $619K by the University of Maryland at Eastern Shore. While the differences among the expenditures by each of the HBCUs for direct expenses were approximately the same as differences among the total amounts received, the amount of funds expended for indirect expenses was nearly equal across all four of the institutions. With an average,

for all participating HBCUs, of $618K used for direct expenses, Saint Paul's College again led the list, with $808K as the highest amount used, and the University of Maryland at Eastern Shore expended the smallest amount for direct expenses, at $442K.

Figure 6
Comparison by HBCU of Total Amounts Received in Basic Project Cost Categories



Participating HBCUs	Total Amount	Fringe Benefits	Direct Expenses	Indirect Expenses
Delaware State University	725	64	497	228
Saint Paul's College	1,025	88	808	217
Savannah State University	987	147	710	279
University of Maryland at ES	669	99	442	228
Average	852	100	614	238

2. HBCU Approaches to SPO Development

The four institutions were quite comparable in the approaches that they took to development of their respective SPOs. The staffing and equipping of the SPOs followed somewhat different patterns, but ultimately achieved similar functions, as illustrated in the tables below. The descriptions in Table 5 show the comparable number and function of the current staff members in each SPO, based on staff roles described in annual reports and in site visit interviews. It should be noted, however, that the roles in each SPO have evolved over the past four years, following different paths that are discussed in the case histories in Section IV. The comparability of the described roles is also undermined somewhat because the institutions varied in the detail of their role descriptions. In addition, the institutions varied in the extent to which responsibilities are informally shared across position titles.

Table 5

Responsibilities of SPO Staff at Each HBCU

Major Responsibilities of SPO Staff	PARTICIPATING HBCU			
	Delaware State University	**Saint Paul's College**	**Savannah State University**	**Univ of Maryland Eastern Shore**
SPO Director	Primarily Pre-award activities: (1) Opportunity searches, (2) Identifying needed matching funds, (3) Reviewing all proposals (4) Obtaining required signatures (5) Overall Office Supervision	Pre-Award and Supervisory activities: (1) Assisting faculty with Proposal Development (2) Developing contacts with Federal program administrators (3) Serving as a liaison to faculty members in identifying opportunities (4) Overall Office Supervision	Primarily Pre-Award and Public Relations activities: (1) Liaison to potential funders, negotiating on financial matters when necessary, (2) Ensuring availability of matching funds from other SSU administrators, (3) Developing incentives for faculty to get involved with proposal writing (4) Developing externally marketable services of the SPO (5) Overall supervision of the SPO	Primarily Pre-award activities: (1) Liaison to potential funders, (2) Liaison to 25 faculty members regarding their research interests and related funding opportunities (3) Participating in and implementing workshops on proposal writing and project management (4) Assisting faculty with the development of competitive proposals (5) Overall Office Supervision

Table 5, continued
Responsibilities of SPO Staff at Each HBCU

Major Responsibilities	Delaware State University	Saint Paul's College	Savannah State University	Univ of Maryland Eastern Shore
Assistant Dir.	"Assistant Director" Primarily Managing Information Flow: (1) tracking of projects that have been funded, (2) identifying available opportunities related to faculty interests, (3) notifying faculty of opportunities through newsletters or memoranda, (4) reviewing budgets with faculty and with Business Office, (5) Ensuring availability of matching funds (6) Conducting Post-Award Conference with PI (7) Sending report deadline reminders to PIs	"Director of Title III Programs" (currently vacant) Primarily Assisting with Pre-Award Activities and Title III Administration: (1) liaison to faculty in identifying funding opportunities (2) Assisting faculty with proposal development (3) Compiling annual reports and continuations/ applications for Title III programs (4) Monitoring expenditures for Title III programs	"Assistant Director" Primarily Managing Information Flow: (1) determining faculty research interests, (2) identifying available opportunities related to faculty interests, (3) notifying faculty of opportunities through newsletters or memoranda, (4) assisting faculty with proposal and budget development, (5) ensuring regulatory compliance, (6) tracking all proposals and awards, (7) posting SPO information on the world wide web and SSU LAN	"Assistant Director" Primarily Assisting with Pre-Award Functions: (1) Liaison to ten faculty members regarding their research interests and related funding opportunities (2) Producing annual and semiannual reports required by the State, (3) Troubleshooting in areas related to preparation and implementation of project budgets (4) Monitoring compliance of proposals with applicable regulations
Associate Director	"Grants Officer" Primarily Monitoring Budgets and Regulatory Compliance: (1) development and updating of compliance manuals, (2) coordinating Institutional Review Board (IRB) meetings, (3) entering project data into the tracking system, (4) reviewing proposals and budgets	"Post-Awards Clerk" Primarily Monitoring Budgets and Regulatory Compliance (1) Tracking all proposal submissions and awards by computer (2) Monitoring all sponsored project expenditures (3) Liaison to faculty for processing requisitions	"Assistant Director of the Survey Research Center (SRC)" Primarily Supervising the SRC and Assisting with Internal SPO Administration (1) Maintaining budgets for the SPO's general operation and specific projects, (2) Assisting in the development of proposals emanating from the SPO (3) Proofreading faculty proposals (4) Monitoring contracts that involve the SRC	"Grants and Contracts Associate" Primarily Monitoring Budgets and Regulatory Compliance (1) Reviewing and processing requisitions (2) Ensuring that requisitions are consistent with sponsor regulations (3) Entering project data into the Tractell system that is used by both the SPO and the Business and Finance Office (4) Assisting with report production and proposal proofreading
Support Staff	"Secretary" (currently vacant) and Student Assistants Provide clerical help to SPO staff	"Secretary" and Student Assistants Provide clerical help to SPO staff	Student Assistants Provide clerical help to SPO staff	Student Assistants Provide clerical help to SPO staff

In addition to the role descriptions presented in Table 5, it is important to note the following other aspects of the staffing patterns related to sponsored programs at the participating HBCUs:

- At DSU, the Dean of Graduate Studies and Research, as immediate supervisor of the SPO Director, and as an administrator sharing some facilities with the SPO, provides occasional assistance with internal institutional negotiations and processing of proposals;

- At SPC, the role of Director of Title III Programs is not currently well-defined, as it was vacated during the transition from the former SPO Director to a new SPO Director;

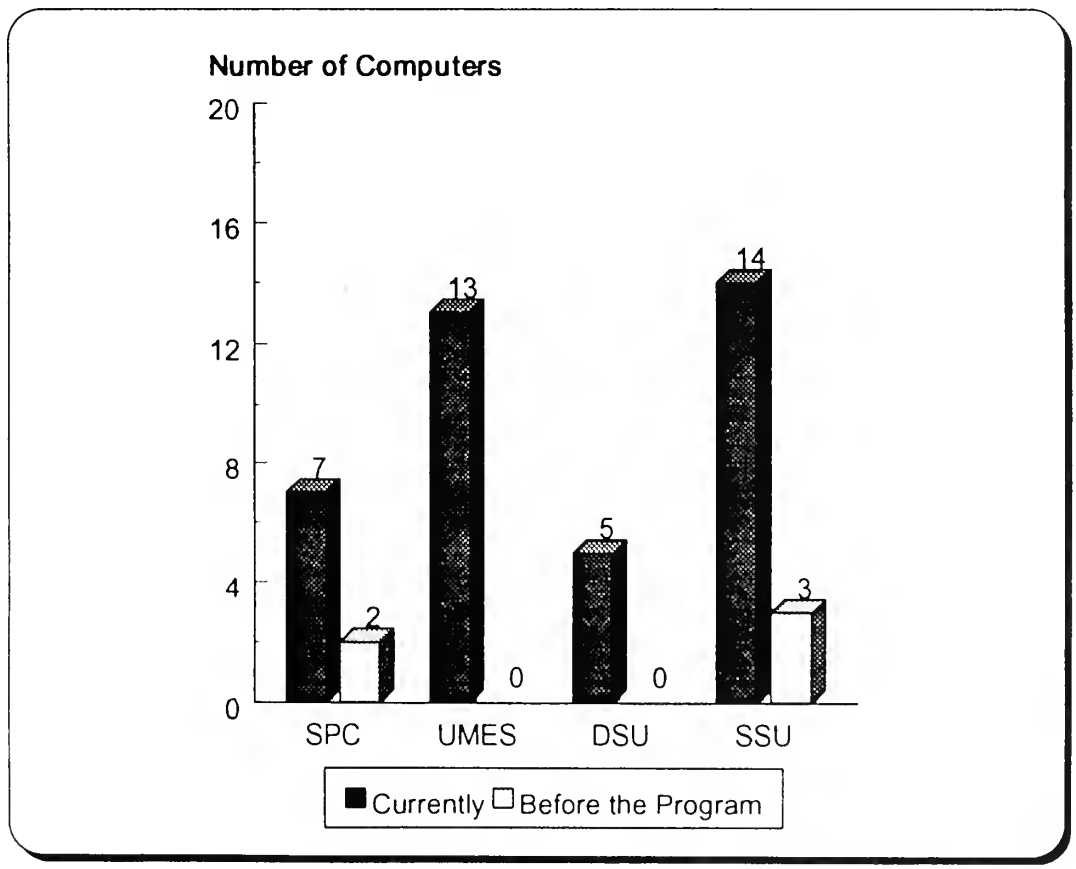
- The need of SSU, during the last year of the program, to emphasize sustainability of the SPO has resulted in establishment of a Survey Research Center as a component of the SPO, rather than the development of a designated post-award staff role; and

- All four institutions have appointed or hired an individual within the institution's Business Office to focus primarily on meeting the fiscal administrative needs arising from sponsored programs.

In order to enable the staff to fulfill their intended roles in the SPO, one of the most significant and necessary equipment investments for each HBCU was the purchasing of computers, which are vital to the administrative capacity of the office. Figure 7 illustrates the number of computers that are currently available for use within each SPO, and the number that were devoted to sponsored programs prior to the *HBCU Capacity Building Program*. It should be noted that both UMES and SSU have acquired a surplus of computers, arising from upgrades. They have taken advantage of this surplus by loaning older equipment to faculty for proposal production and other activities related to obtaining or managing sponsored programs. At SSU, 6 of the computers are used primarily within the Survey Research Center (SRC) for data collection, involving the computer-assisted telephone interview (CATI) system that is the primary research tool of the SRC.

The four institutions vary somewhat in their use of the computers. The most notable difference is the emphasis, at SSU and UMES, on using the increasingly available resources on the world wide web as a replacement for many paper resources that were once considered key elements of an SPO library. These institutions are also using their on-line capabilities for an increasing amount of internal information dissemination, including policy manuals, commonly used Federal forms, and program announcements. World Wide Web capabilities also facilitate the external promotion of institutional capabilities and faculty research interests at SSU and UMES, partly through hyperlinks to SPO-related materials.

Figure 7
Number of Computers Used to Conduct the Business of the Sponsored Programs Office, Currently and Before the PHS/OMH Program, by Participating HBCU



Other aspects of the institutional strategies for SPO development focused on SPO staff training, and formulation of policy recommendations to address the internal barriers or lack of motivators for faculty involvement in sponsored programs. The training needs of SPO staff varied significantly among the four institutions, making this an important qualitative issue that is addressed in the case histories in Section IV. In general, the case histories and the measured outcomes indicate that prior experience and training, in areas explicitly related to the administrative processes needed in an SPO, significantly helped two of the participating HBCUs, UMES and SSU, to work productively toward their goals for SPO establishment, as discussed in the case comparisons in Section V.

In the area of barriers to sponsored programs participation, there were numerous policy–related changes at each of the four participating institutions, mostly aimed at encouraging faculty to write proposals and to use uniform procedures for the administration of sponsored projects. Table 6 presents a summary of the policy issues that the SPO, at each of the four HBCUs, actively attempted to address, as of the data collection in February of 1997.

While all four of the HBCU SPOs engaged in some activities related to the distribution of indirect expense funds, the efforts of the SPOs have made limited progress at three of the institutions. At UMES, the distribution formula took effect in early 1997, despite a State mandate issued four years earlier requiring the establishment of such a formula. At SSU, which is the only institution of the four that has explicitly included the SPO in its formula, faculty and administrators report that the established formula is rarely used, due to the ongoing financial crises that require the institution to use such funds for repairs of the physical plant and other obligations. At SPC, no official formula had been established, despite advocacy by the SPO that a formula is needed. Even with the limited success of SPO efforts regarding changes in financial policies, faculty at all four institutions report that the SPO is important as an institutional focal point for pursuing and promoting such policy changes.

Table 6

Policy Issues Addressed by the SPO at each HBCU

Policy Issue	Participant HBCU SPO Addressing the Policy Issue			
	Delaware State University	Saint Paul's College	Savannah State University	University of Maryland Eastern Shore
Release time for program award recipients	✓	✓	✓	✓
Considerations of accounting categories for indirect expenses	✓	✓	✓	✓
Structure of requirements for "sign-off" approval of proposal submissions	✓	✓	✓	✓
Channeling of a portion of indirect expense funds explicitly to the SPO		✓	✓	✓
Channeling of a portion of indirect expense funds explicitly to the department(s) in which a sponsored program is implemented	✓	✓	✓	✓
Channeling of a portion of indirect expense funds explicitly to the Program Director/ Principal Investigator for indirect program support	✓		✓	✓

It should be noted, also, that the four institutions were consistent in the assertions by SPO staff that they did not engage in aggressive recruiting of faculty to engage in sponsored programs activities. The common assumption was that an aggressive policy would only serve to alienate those faculty who might be suspicious of the new SPO as a further layer of bureaucracy at the institution, making unwanted demands on faculty time. With this concern in mind, three of the SPO directors focused on soliciting faculty involvement only by publicizing the availability of SPO services and notifying faculty of funding opportunities that appeared to fit individual or departmental interests. A somewhat different strategy was employed at SPC, where one faculty member in each of the three academic departments was funded under the capacity building program to commit 25-percent time to the role of liaison between the

department and the SPO. However, this practice ended in 1996 with the end of the OMH-funded program.

All four SPOs also participated in the development of their institutions' policy manuals, clarifying the internal institutional processes for such issues as proposal submissions, project administration, and use of matching funds, as well as external funder requirements for regulatory compliance. This type of activity was often cited by faculty as a valuable service of the SPO, making the processing of proposals more standardized and less time consuming. Specifically, the SPO helped faculty to complete the process correctly the first time around, reducing the need to go through additional rounds of corrective action.

3. Measures of Program Outcomes

A careful assessment of goal achievement is presented as part of the comprehensive case histories for each of the four HBCUs. In general, the site visits and other available data suggest that all four institutions met all or most of their basic goals for establishment of a fully functional SPO. The notable exception was the limited involvement of SPOs in the provision of post-award services, especially at SSU. With its small faculty and small number of sponsored programs, SPC appears to have been in the best position to address post-award issues on behalf of faculty. In general, it appears that, by the end of the cooperative agreements, all four of the HBCUs had succeeded in establishing intended pre-award policies and services through the SPO, as well as uniform post-award policies, most of which involve the services of the HBCU's business office rather than the SPO.

The one quantitative *outcome* indicator of program success cited most often by OMH personnel, as well as interviewees at the HBCUs, is the desired growth in the rate of submissions made, and awards received by, the participating HBCUs each year

since the program began. Ideally, such data should be discussed with reference to any trends that existed prior to the program. Unfortunately, while all four HBCUs were able to provide rough estimates of the overall level of external funding to the institutions in the years prior to the PHS/OMH program, none of the HBCUs had a centralized system for tracking of proposal submissions and awards prior to the start of the cooperative agreement with PHS in 1992.

The lack of reliable pre-program data severely limits the analysis of the submissions and awards through quantitative methods, such as an interrupted time series design. The available pre-program data only help to establish that all four of the HBCUs had very limited grants and contracts activity, mostly due to the efforts of a few experienced grant writers among the scientists and administrators of each institution. Tables 7 through 10 present a summary of the number of proposal submissions and the number of awards for each HBCU during each year of the PHS/OMH program. As is visible in the tables, steady growth in awards is most apparent at the University of Maryland at Eastern Shore. Also of note is the SSU data, showing that the number of awards has increased steadily from 1992 to the present, starting at a very low level of only 5 submissions in 1992. The dollar amount of awards at SSU, however, has increased at a less remarkable rate, possibly due to the continuing need for an improved programmatic infrastructure for research at SSU.

It should be noted that Tables 7 through 10, referenced above, include the acquisition of support for the PHS/OMH program each year. This is a particularly significant consideration at SPC and SSU, where the OMH support for the fourth year of SPO development comprised 36 percent and 14 percent, respectively, of the total dollar amount of awards that year. By comparison, the OMH support for the same year at DSU and UMES was 7.6 percent and 2.2 percent, respectively, of the total dollar amount of awards during the fourth year of the program. Given the conclusion of the *HBCU Capacity Building Program* at these four institutions, these numbers suggest

Table 7

Quantitative Indicators of SPO Productivity at DSU, by Year of PHS/OMH Support

Productivity Indicator*	DSU Fiscal Year of PHS/OMH Program**			
	10/92 to 9/93	10/93 to 9/94	10/94 to 9/95	10/95 to 9/96
Number of Awards	36	32	53	26
Dollar Amount Awarded	$2,909,127	$2,155,055	$3,090,945	$2,081,029
Number of Unfunded Submissions	27	27	18	27***
Dollar Amount of Unfunded Submissions	$6,809,788	$3,908,271	$4,581,937	$1,065,468
Dollar Amount Requested in Submissions Pending	Not Available	Not Available	Not Available	$4,579,412***

Notes Regarding DSU Submissions and Awards:

**These data do not include the entitlement support provided to HBCUs through formula mechanisms established in Title III, Part B, of the Higher Education Act or through USDA formula-based support.*

***The fiscal year at Delaware State University (DSU) runs from July 1 to June 30.*

****The 27 "Unfunded" submissions in the 1995-1996 fiscal year include 13 that are pending. "Pending" submissions are those for which no decision has been rendered by the funding agency. As such, these represent potential awards for the next fiscal year.*

Table 8

Quantitative Indicators of SPO Productivity at SPC, by Year of PHS/OMH Support

Productivity Indicator*	SPC Reporting Year of PHS/OMH Program			
	10/92 to 9/93	10/93 to 9/94	10/94 to 9/95	10/95 to 9/96
Number of Awards	5	11	12	17
Dollar Amount Awarded	$1,057,247	$1,782,924	$732,517	$800,597
Number of Unfunded Submissions	18	16	19	17
Dollar Amount of Unfunded Submissions	$2,424,211	$2,564,919	$2,722,618	$1,469,157

**Note Regarding SPC Submissions and Awards:*

These data do not include the entitlement support provided to HBCUs through formula mechanisms established in Title III, Part B, of the Higher Education Act

Table 9

Quantitative Indicators of SPO Productivity at SSU, by Year of PHS/OMH Support

Productivity Indicator*	SSU Reporting Year of PHS/OMH Program**			
	8/92 to 7/93	8/93 to 7/94	8/94 to 7/95	8/95 to 7/96
Number of Awards	5	10	17***	22
Dollar Amount Awarded	$1,290,451	$1,476,868	$2,055,014***	$1,993,844
Number of Unfunded Submissions	18	21	****	15
Dollar Amount of Unfunded Submissions	$5,820,499	6,892,465	****	11,921,723

Notes Regarding SSU Submissions and Awards:

**This table does not include the entitlement support provided to HBCUs through formulas established in Title III, Part B, of the Higher Education Act.*

***The reported years extend from August to July of each year .*

****These figures include estimates of continuation funding for three projects, totaling $800,000, for which specific data are not currently available.*

*****These data on unfunded submissions are not available due to the change of SPO administration and report format for year 3 of the program.*

Table 10

Quantitative Indicators of SPO Productivity at UMES, by Year of PHS/OMH Support

Productivity Indicator*	UMES Fiscal Year of PHS/OMH Program**			
	7/92 to 6/93	7/93 to 6/94	7/94 to 6/95	7/95 to 6/96
Number of Awards	64	61	84	97
Dollar Amount Awarded	$5,112,077	$5,308,215	$9,309,773	$8,154,022
Number of Unfunded Submissions	***	***	***	***

Notes Regarding UMES Submissions and Awards:

**These data do not include the entitlement support provided to HBCUs through formula mechanisms established in Title III, Part B, of the Higher Education Act or through USDA formula-based support.*

***The fiscal year at UMES runs from July 1 to June 30.*

****The University of Maryland System (UMS) does not require its institutions to track unfunded proposals.*

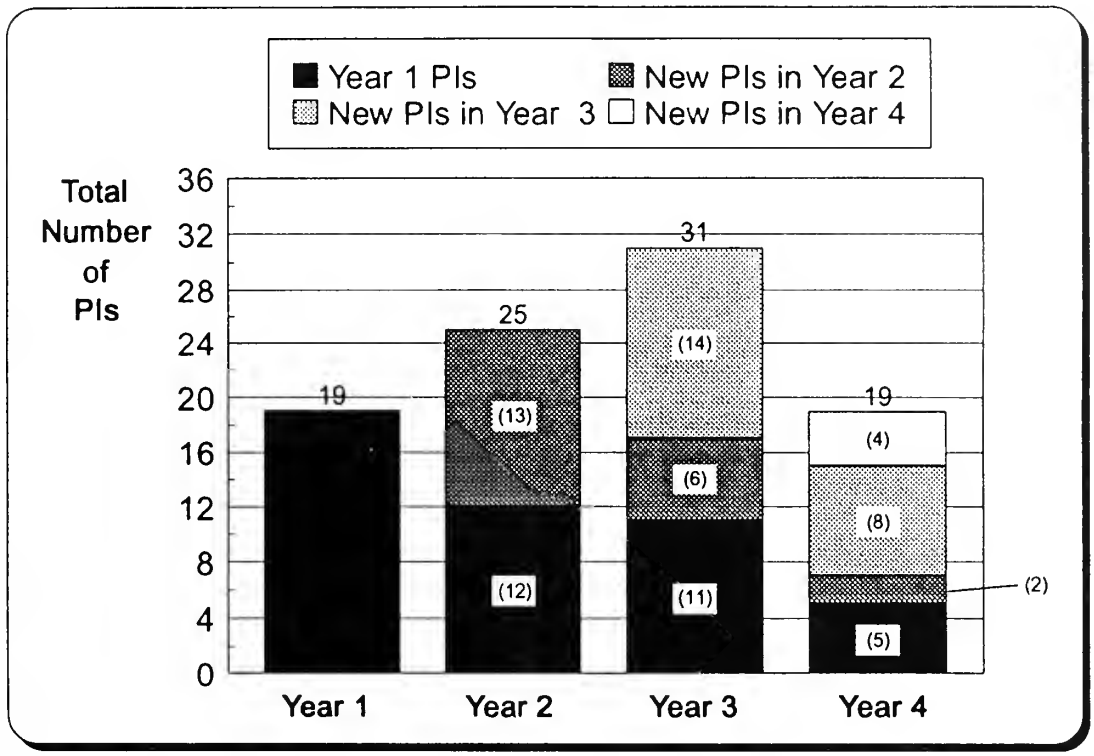
that any assessment of the change in levels of funding each year might be more meaningful if the PHS/OMH program support is subtracted from the annual totals for each HBCU. In addition, it is important to recognize that the PHS/OMH support was comparable across all four institutions, despite their differences in size, with somewhat more money actually directed to the smaller institutions. In general, it is important to acknowledge the fact that the institutions differ in their overall capacity to generate funds. For example, SPC currently reports a total of 42 faculty members, as compared with 140 at SSU, 179 at DSU, and 300 at UMES. Clearly, this suggests that there is less potential for proposal writing and project management at the smaller of these institutions. Such contextual factors are discussed in detail in the case histories in Section IV.

A further indication of the impact that the PHS/OMH program has had on each of the four HBCUs is the extent to which each institution has had an increase in the number of faculty participating in sponsored programs. Figures 8 through 11 provide numerical summaries and graphic representations of the degree to which the SPO at each HBCU has succeeded in recruiting new PIs for sponsored programs and, thus, cultivating a broader base of revenue-generating personnel on campus. The site visit interviews with faculty suggest that a larger pool of PIs also helps to create a norm of grant writing and project development. Such a norm may be a key to institutionalizing the pursuit of sponsored programs on campuses that have previously emphasized teaching as the defining role of faculty.

Each figure shows the total number of reported PIs for each year of the program, including the PI for the capacity building program. In addition, the number of PIs for each year is subdivided to show the number of PIs who were newly reported during that year of the program, as well as the number continuing or reappearing from each previous year of the program. It is possible that some of the "new" PIs had served as PIs in years prior to the program. However, the available data only permit the consistent tracking of participation during the four-year PHS/OMH program.

Figure 8

Number of PIs Reported at DSU,
by Year of the PHS/OMH Program and by Year of First Reported Participation



In Figure 8, it is evident that the SPO at DSU succeeded in recruiting new PIs each year, with growth in the overall number of PIs in the second and third years. Each successive year, however, there tends to be a loss of participation by individuals who had received awards in prior years. In year four of the program, this loss of prior PIs outweighed the gains, bringing the total number of PIs back to the level of the first year of the program. The figures for all four institutions show similar patterns of PI loss within each cohort of new PIs, with UMES being the only institution to sustain the overall growth of its PI base. It is possible to hypothesize several potential causes of PI loss from year to year, such as the following:

- Retirement of faculty members;
- Transfer of faculty to new positions at other universities;
- Loss of faculty who do not achieve tenure;

- Transfer of project responsibilities from tenured faculty to newer tenure-track faculty, for their professional development;

- Limited participation of faculty seeking only a specific one-time award, such as for laboratory equipment or a professional development activity; or

- Disenchantment of new awardees with the process of obtaining or managing an externally sponsored project, due either to difficulties inherent to the funder or to challenges related to the internal processes of the awardee's institution.

Site visit interviews suggest that all of these factors may have been significant. Data are not available, however, to indicate the relative importance of each factor.

Figure 9
Number of PIs Reported at SPC,
by Year of the PHS/OMH Program and by Year of First Reported Participation

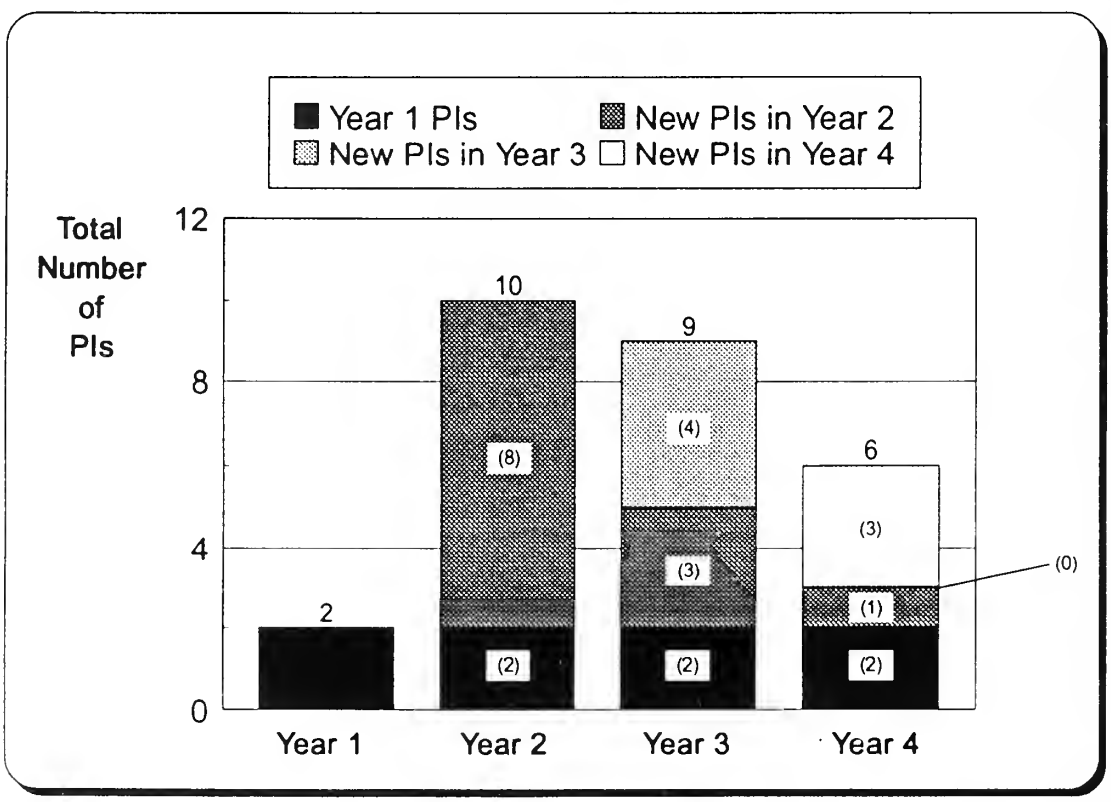


Figure 10

Number of PIs Reported at SSU,
by Year of the PHS/OMH Program and by Year of First Reported Participation

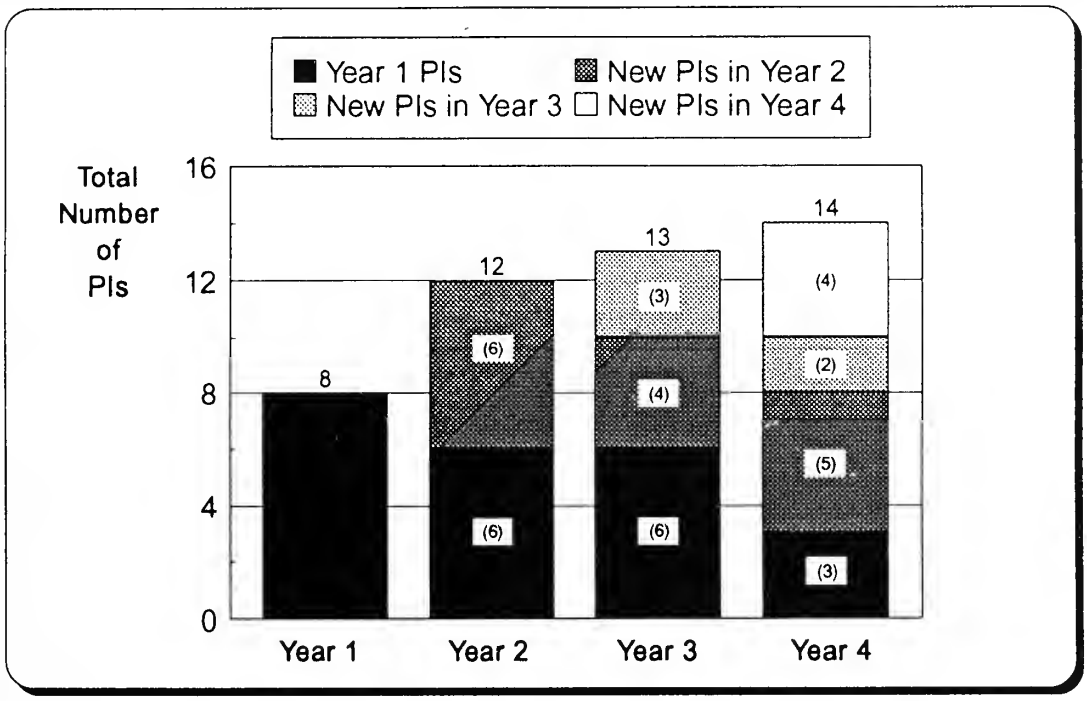
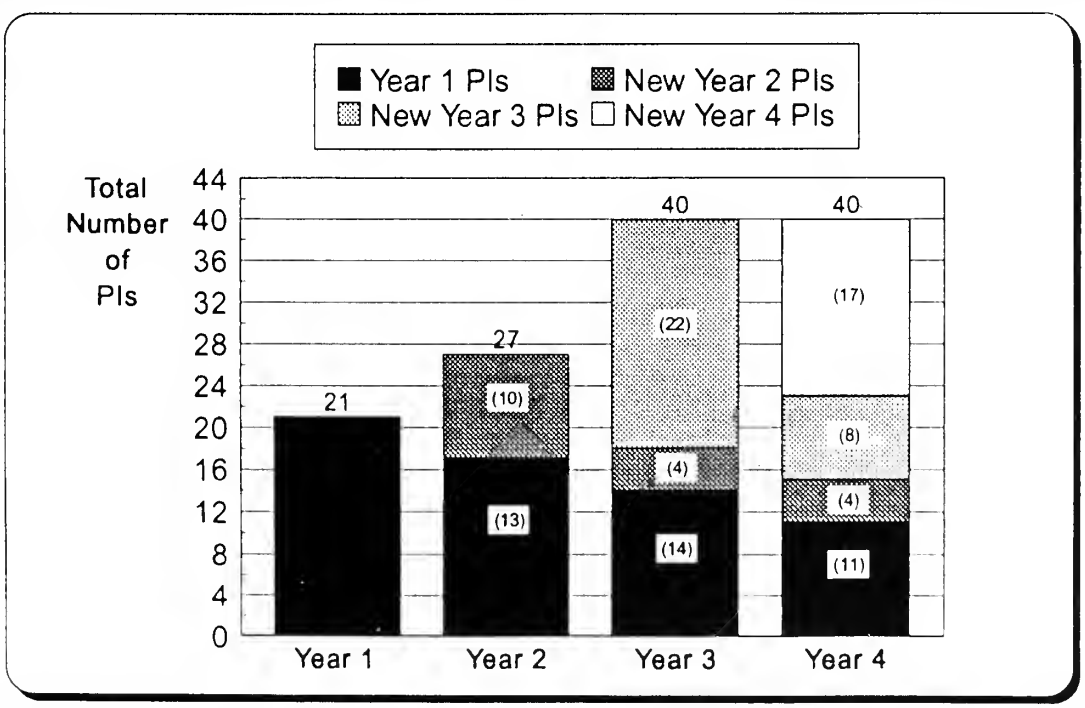


Figure 11

Number of PIs Reported at UMES,
by Year of the PHS/OMH Program and by Year of First Reported Participation



For clarity, Table 11 provides a different distribution of the PI data, displaying the number of individuals who served as PIs for one, two, three, or all four years of the PHS/OMH support. The table also indicates the number of persons who participated in particular combinations of the years of capacity building. These data are important because they permit distinctions to be made between perennial participants and occasional participants in sponsored programs. Specifically, when Table 11 is considered along with Figures 8 to 11, it is clear that some PIs are more consistent participants in sponsored programs than others, with some appearing to be only "one-shot" PIs who dropped out of the pool of PIs in later years of the capacity building program.

These data reveal still more potential complexity in patterns of faculty participation. Figure 9 shows that by year 4, only one PI at SPC was from the group that was "new" in year 2. Table 11, however, shows that no one from the "new" cohort in year 2 participated for all three years. Thus, Table 11 helps to reveal the fact that the lone member of the year 2 cohort remaining in year 4 had not participated in year 3. In other words, the pattern of PI loss from year to year is not a simple pattern, but reflects a combination of individuals who move in and out of the participant group from year to year, rather than being perennial participants or one-time participants. This interpretation is not entirely reliable, however, because the data suggest that some PIs received multi-year awards that did not require the processing of an annual continuation. Thus, the most clear attrition is considered to be evident among those first year and/or second year PIs who did not continue to serve as PIs for at least the last two consecutive years of the capacity building program.

It is also important to note that these data do not include faculty who may have attempted to participate by writing proposals without success in gaining awards. Given the role that such unsuccessful participation may play, as practice for possible future success, it may be important to give this issue greater attention in future studies of SPO-related capacity building.

Table 11

Number of PIs Reported Each Year, by HBCU and by Specific Years of Reported Service as PI

Year(s) in Which PI Participated	Number of Participating PIs at Each HBCU			
	DSU	SPC	SSU	UMES
Four Years of Participation				
1, 2, 3, 4	3	2	3	7
Three Years of Participation				
1, 2, 3*	4	0	2	3
1, 2, 4	1	0	0	1
1, 3, 4	1	0	0	1
2, 3, 4	1	0	4	4
Total of 3-Year Participants	7	0	6	9
Two Years of Participation				
1, 2**	4	0	1	8
1, 3*	3	0	1	3
1, 4	0	0	0	2
2, 3*	5	3	0	0
2, 4	0	1	1	0
3, 4	8	0	2	9
Total of 2-Year Participants	20	4	5	22
One Year of Participation				
1**	3	0	1	1
2**	7	4	1	7
3*	6	4	1	14
4	4	3	3	17
Total of 1-Year Participants	20	11	6	39
Total of All Participants	50	17	20	77
Total of Possible Attrition (% of All Participants)	18 (36%)	7 (41%)	4 (20%)	20 (26%)
Total of Likely Attrition (% of All Participants)	14 (28%)	4 (24%)	3 (15%)	16 (21%)

**Possible attrition: PIs not participating since the end of year 3.*
***Likely attrition: PIs not participating since the end of year 1 or year 2.*

Analysis of data regarding proposal submissions and awards for the PHS/OMH *HBCU Capacity Building Program* participants is hampered by the unavailability of consistent data on unsuccessful submissions for two of the institutions. Ideally such a success rate could be expressed in two ways:

1) The percentage of all submissions that resulted in awards; and
2) The percentage of all dollars requested that was awarded.

Neither of these indexes can be calculated for UMES, because that institution does not maintain summary data on unfunded submissions. The SSU data are distinctly missing and/or unreliable for year 3, as shown earlier in Table 9, so that it is not possible to track the data across all four years. This unreliability is due to data that were not tracked during the transition from the initial SPO staff to the fourth-year SPO staff. Only the *number* of unfunded submissions can be tracked for DSU. At all three of the HBCUs with unfunded submissions data, those data are potentially biased for year 4 as a result of submissions which may have been still pending at the time of the evaluation site visits. These factors of unreliability in the data preclude the drawing of strong conclusions about unfunded submissions. In general, however, the estimates of proposal award rates, shown in Table 12, show that at least two of the HBCUs greatly improved their award rates from the first year to the fourth year of capacity building.

Table 12
Estimated Award Rate of Proposal Submissions, by HBCU, for Year 1 and Year 4

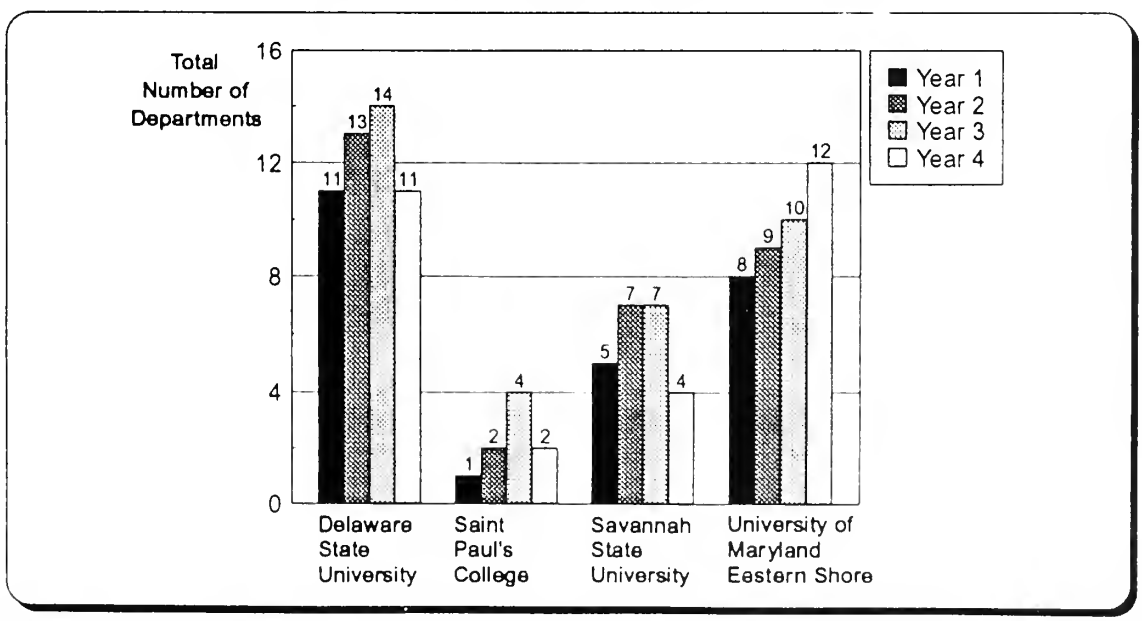
HBCU	Year 1			Year 4		
	Submissions*	Awards	Award Rate	Submissions*	Awards	Award Rate
DSU	63	36	57%	53	26	49%
SPC	23	5	21%	34	17	50%
SSU	23	5	21%	37	22	59%
UMES	***	64	***	***	97	***

**The "Submissions" estimate combines the competitive awards, as well as competing and non-competing continuations for the year, with the unfunded submissions for the year, which may inadvertently include awards for which submissions were actually made in a previous year.*
***The "Awards" estimate includes competitive awards, as well as competing and non-competing continuations for the year,*
****UMES did not maintain summary data of its unfunded submissions.*

It is notable that the award rates presented in Table 12 are quite high, especially in year 4. In the case of DSU, the award rate started out extraordinarily high in year 1, with only a small decline by year 4, so that this decline is not a particularly negative finding. As discussed in the case DSU case history in Section IV, the relatively strong performance in year 1, with seemingly little improvement from year 1 to year 4, is probably indicative of a quick start-up, facilitated by pre-program initiatives that had already been launched by the institution's SPO Director.

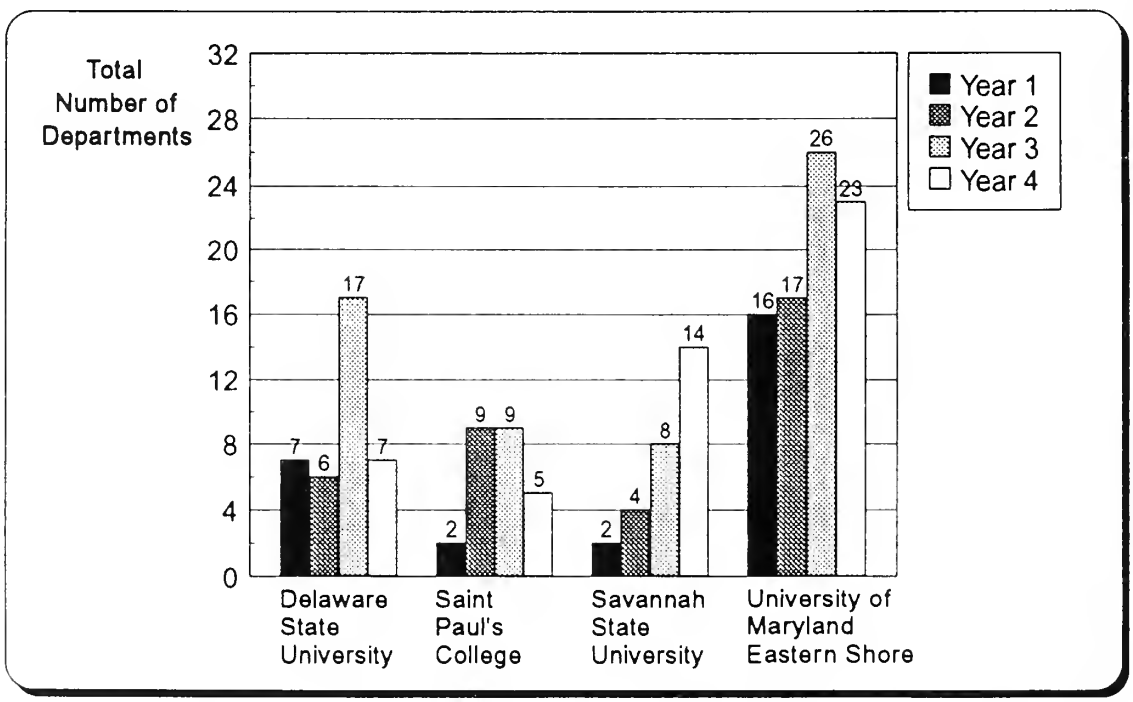
Another quantitative indicator of capacity building success is the extent to which participation of academic departments has shown an increase at each HBCU. Typically, science departments, such as biology and chemistry, have had greater opportunities, a more consistent norm, and more experience in sponsored program participation. The SPO, therefore, is most likely to be of greatest service to the other academic departments, where faculty are less experienced in acquiring and managing sponsored programs. In all four institutions, there was growth, during the first three years of the program, in the number of departments involved in sponsored programs, as illustrated in Figure 12. Only UMES sustained that growth through the fourth year.

Figure 12
Number of Departments Reported as Having Externally Funded Programs, by HBCU and by Year of PHS/OMH Program



At each of the four HBCUs, there were administrative units that pursued sponsored programs, usually for other types of capacity building or cross-cutting improvements in academic and research programs. It is important to note that all such non-academic or administrative units of the institution were combined into one "Institutional" category, which was counted as one "department" in calculating the "number of departments" participating in sponsored programs. Funding for the "Institutional" category followed the same general trend as the academic departments, showing increasing numbers of such awards in the first three years of capacity building, followed by decline in the fourth year, as illustrated in Figure 13. It should be noted that the award data include new competitive awards, as well as competing and non-competing continuations obtained each year. The "Institutional" data also include the PHS/OMH capacity building awards to each SPO.

Figure 13
Number of Sponsored Awards to "Institutional" Divisions Other Than Academic Departments, by HBCU and by Year of PHS/OMH Program



It is not clear, from the available data, why the four HBCUs had such consistent declines in their portfolio of funding during the fourth year of the program. During site visits, interviewees made general comments about the reductions in federal program budgets and an increasing level of competition, among all colleges and universities, for federal and state funds that have not kept pace with the student needs and enrollments, which increased at all four institutions from 1991 to 1995, according to data reported by the National Center for Education Statistics. It is also possible that the institutions were reaching a saturation point, beyond which it was difficult to continue acquiring more program support while continuing to implement programs that were already funded. It is notable that SSU was able to sustain a steady growth in its "institutional" category of sponsored programs funding. However, it is apparent from the existing data that much of the continued increase in "institutional" funding at SSU is directly attributable to the new Survey Research Center (SRC) that has been operated within the SPO since 1995. Given that many of the projects for which the SRC received funding are associated with research in the natural and social sciences, the SRC success may bias the "Institutional" numbers because of its location within the university administration. Other aspects of the patterns of funding within each HBCU are addressed in detail in the case histories in Section IV.

One other important consideration is the extent to which the SPO development encouraged the involvement of a greater variety of academic departments in sponsored programs. It is relatively common for HBCUs to have at least some competitive external funding for projects in Biology, and Chemistry. Thus, it is important to determine whether the new SPO was successful in establishing grants or contracts in departments outside of those traditionally active science departments. The data show that there was mixed success in increasing the involvement of other academic departments such as Fine Arts, History, Social Science, Physical Therapy, and other departments in the humanities, the behavioral sciences, and other professional specialties. That increased involvement is illustrated in Table 13. Only UMES data show a sustained or consistent increase.

Table 13

Types of Academic Departments Reporting External Support through Competitive Funding Mechanisms, by HBCU and by Year of PHS/OMH Program

HBCU Academic Department Categories	Year of Capacity Building Program			
	Year 1	Year 2	Year 3	Year 4
DSU				
Biology/Chemistry	√	√	√	√
Other Natural Science/Technology	√	√	√	
Social Science	√			
Health/Social Service Professional Training	√	√	√	√
Other Professional Training	√	√	√	√
Humanities	√	√	√	
SPC				
Biology/Chemistry		√	√	√
Other Natural Science/Technology*				
Social Science			√	
Health/Social Service Professional Training**				
Other Professional Training			√	
Humanities***				
SSU				
Biology/Chemistry	√	√	√	√
Other Natural Science/Technology		√	√	√
Social Science				√
Health/Social Service Professional Training		√	√	
Other Professional Training	√	√	√	
Humanities	√			
UMES				
Biology/Chemistry	√	√	√	√
Other Natural Science/Technology	√	√	√	√
Social Science	√		√	√
Health/Social Service Professional Training	√	√	√	√
Other Professional Training			√	√
Humanities		√		√

**Saint Paul's College has only one department for all natural sciences*

***Saint Paul's College has no professional training department in health or social service fields*

****Saint Paul's College combines humanities with social sciences in one department*

Finally, in order to put the departmental data into an appropriate context, it is important to consider the differences in the size and structure of the four HBCUs. The institutions each have the following number of academic departments:

- Delaware State University: 23;
- Saint Paul's College: 3;
- Savannah State University: 10; and
- University of Maryland Eastern Shore: 14.

The smaller number of departments at SSU, and especially at SPC, suggest that smaller numbers are to be expected in the tallies of departmental involvement with sponsored programs. What is more important in the departmental figures is the extent to which the numbers increased towards each institutional maximum. The data suggest that UMES and SPC came closest to involving all of their departments, while SSU had the least departmental involvement, peaking at only half of the departments.

One additional set of quantitative indicators is particularly relevant, given the investment of PHS and OMH in the four HBCUs as potential participants in DHHS grants and contracts. In a long-term assessment of the program, it would be important to ask: Did the four HBCUs increase the number and dollar amounts of awards from DHHS? Under the current circumstances, given the very recent completion of the *HBCU Capacity Building Program*, as well as fluctuations in the budgets of DHHS agencies, it may be too early to get a definitive answer to that question. As shown in Table 14, there is little evidence of any increase in DHHS participation among the four HBCUs. The table presents numbers of awards and dollar amounts for each year of the capacity building program, with and without the PHS/OMH support of the SPO. Overall funding amounts suggest that only SPC and SSU had a net increase in their DHHS funding when year 1 is compared with year 4. The table also shows that the increase at SPC is entirely attributable to an increase in its *HBCU Capacity Building Program* funding, which was the only DHHS support SPC received in years 1 and 4.

Thus, by this measure, only SSU shows a clear increase in its DHHS involvement. The data show that DSU consistently and precipitously declined in its DHHS funding, while UMES also declined, although not nearly to the same degree. Taken together, these data suggest that there has been no systematic improvement in the HBCU participation in DHHS programs as a result of the capacity building program, despite previously discussed data that show much more consistent growth in sponsored program funding and participation levels.

Table 14

Number and Dollar Amount of Awards Received from DHHS by HBCUs, Including and Excluding PHS/OMH Capacity Building Program, by Year of the Program

HBCU	Year of the Capacity Building Program							
	Year 1		Year 2		Year 3		Year 4	
	Number of Awards	Value of Awards	Number of Awards	Value of Awards	Number of Awards	Value of Awards	Number of Awards	Value of Awards
DSU								
All Awards	5	$1,100,958	5	$916,754	3	$232,104	4	$168,669
Without Cap Bld	4	$912,992	4	$723,961	2	$76,882	3	$36,383
SPC								
All Awards	1	$192,446	3	$512,630	2	$564,525	1	$287,607
Without Cap Bld	0	$0	2	$302,938	1	$296,778	0	$0
SSU								
All Awards	2	$308,176	3	$845,839	3	$490,445	3	$552,625
Without Cap Bld	1	$100,000	2	$617,000	2	$240,522	2	$301,025
UMES								
All Awards	9	$1,078,175	4	$604,995	6	$788,199	7	$459,391
Without Cap Bld	8	$911,900	3	$445,744	5	$924,939	6	$279,925

4. General Implications of Quantitative and Categorical Findings

The quantitative and categorical descriptions of the program implementation and program outcomes at each of the four HBCUs in the capacity building program suggest that the program achieved many of its aims. An SPO was established at each institution. Those offices also succeeded in developing policies for a more structured and uniform set of procedures for obtaining and managing externally sponsored programs. These advances help to ease the burden on faculty who choose to participate in sponsored programs. There can be little doubt that the advances will also improve the image of the institutions, as viewed by potential funding agencies, which now have a conventional and reliable point of contact for matters relating to sponsored programs. Unfortunately, the data on program impact show that the desired positive outcomes, such as increased submissions and awards, or increased involvement with DHHS programs, were achieved only in part. The case histories in the following section provide more detailed descriptions of the unique circumstances and program elements at each institution, lending some additional insight into the differential results at the four institutions in the *HBCU Capacity Building Program.*

IV. CASE STUDIES OF THE FOUR HBCUs

A. OVERVIEW OF SYSTEMATIC CASE STUDY STRUCTURE

In order to have a maximum level of how the *HBCU Capacity Building Program* was implemented at each of the four HBCUs, as well as how that implementation resulted in particular outcomes, it is vital to examine each of the four institutions as separate and distinct cases. At the same time, however, it is important to be able to examine those four cases along as many comparable dimensions as possible, in order to identify evidence of general trends that relate to potentially broad principles of how such capacity building can be most effectively implemented under various conditions. The logic model, presented earlier, provides some guidance in identifying comparable dimensions of the program implementation and theoretically meaningful outcomes. Therefore, in constructing each of the case histories that follow, a consistent structure was followed, ensuring that theoretically important dimensions of all four histories would be addressed in a maximally comparable way. The chosen case history structure is ordered in a largely chronological fashion, running from the pre-program history of the HBCU to a summary of identified program outcomes. Accordingly, each case history has the following nine sub-sections:

1) Pre-Program History of Administrative Infrastructure for Sponsored Programs;

2) Extent of Past Involvement in Sponsored Programs;

3) Strength of Programmatic Infrastructure for Conduct of Sponsored Programs;

4) Initial HBCU Expectations for Use of PHS/OMH Support;

5) Interventions Conducted Under the Capacity Building Program;

6) Needs Addressed by the Capacity Building Program;

7) Relevant Needs Not Addressed by the Capacity Building Program;

8) Summary of Outcomes Indicating Program Success; and

9) Summary of Extra–Program Factors Affecting Program Outcomes.

B. DELAWARE STATE UNIVERSITY CASE HISTORY

1. Pre-Program History of Administrative Infrastructure for Sponsored Programs

Delaware State University (DSU), which was known as Delaware State College until 1994, is an institution that has been making strides toward establishing itself as a true "university." The appointment of a new president in 1987, who is an experienced researcher, and who had some experience with sponsored programs administration in other institutions, marked the beginning of a steady march towards greater involvement with research at DSU. Even so, the course of events during the four-year *HBCU Capacity Building Program* suggests that such top administrative commitment to sponsored programs may not be not enough, by itself, to ensure success, as defined by the program objectives, in obtaining external funding.

Starting in 1987, Delaware State College took several relevant and visible steps toward the establishment of a sponsored programs office. Soon after the appointment of the new president in 1987, he named an Executive Assistant to the President, with primary responsibility for overseeing the administration of Title III programs, funded by the U.S. Department of Education (USED), as well as agricultural research programs funded by the U.S. Department of Agriculture through the 1890 Land Grant system. This Executive Assistant, who was also referred to as the Coordinator of Federal Programs, had limited responsibility for overseeing all other sponsored programs on campus. It was understood, however, that the college needed to move towards a more comprehensive approach to sponsored programs administration.

In 1989, a member of the Biology faculty was awarded an Extramural Associates (EA) fellowship from the National Institutes of Health (NIH). This long-term training gave the DSU EA fellow a significant knowledge base regarding funding opportunities, strategies for competing for such funding, and inroads with several federal agencies. In

addition, the EA program requires that participating institutions make a formal commitment to the establishment of appropriate administrative structures and processes for obtaining and managing sponsored programs. Thus, upon her return from NIH, she was given the title of Director of Sponsored Research, with a 25-percent time commitment to assisting faculty in obtaining funding, especially for biomedical research.

Given this prior history of biomedical research and the initial steps toward formal administration of sponsored programs, it was part of a natural progression that, in 1992, the Director of Sponsored Research pursued two more opportunities related to sponsored programs:

1) Four years of funding from PHS through the *HBCU Capacity Building Program*, to support the initial establishment and operation of a fully functional sponsored programs office, and

2) Nine months of further training, specifically in how to set up and operate a comprehensive sponsored programs office, through Project TAPS (Training in Acquiring Programs that are Sponsored), funded by the U.S. Department of Energy (DOE).

As a result of receiving the PHS funding for capacity building, the Director of Sponsored Research only participated in Project TAPS for the first few weeks of the training program, before withdrawing to fulfill her responsibilities within the capacity building program. The Director of the Center for Excellence in Teaching at DSU was subsequently selected to receive the remainder of the Project TAPS training, under the assumption that the institution could benefit from having someone receive the training. As discussed later in this case history, that assumption may have been inaccurate for reasons relating to institutional politics. Before addressing the external influences on the DSU's implementation of the capacity building effort, however, it is important to consider the more basic factors of programmatic and administrative infrastructure at DSU as it began the PHS-supported capacity building.

2. Extent of Past Involvement in Sponsored Programs

As the foregoing discussion indicates, the pre-program history of DSU placed the institution in the position of being an excellent candidate for the PHS capacity building effort. As described by the college in its original program application, the faculty had sustained a low but consistent level of involvement with externally funded research, service, and training programs, supporting students and faculty. For the three years prior to receipt of PHS support, the college was reported to have had an average of 8 sponsored program awards per year, with an average total of $808,000 per year of extramural funding, not including Title III and 1890 Land Grant funds. This reported level of performance was consistent from 1989 to 1992. While this award acquisition may have reflected limitations of an aging science center that was constructed in 1964, the program application does not cite any such limitations of the programmatic infrastructure. Thus, with the development of the new Office of Sponsored Programs and the growth of the faculty to 170 persons by 1997, it would be reasonable to expect that the institution could cultivate incremental growth in sponsored programs participation as a result of the PHS-supported capacity building.

It should be noted that, before the capacity building effort, DSU's involvement with sponsored programs was sufficiently limited that a low priority had been placed on formalizing the processes of sponsored programs administration. Faculty were largely responsible for seeking out sources of funding for themselves. Post-award administration was limited to the relatively mechanistic monitoring and processing of funds through the Division of Business and Finance. While the institution had certain policies in place for release time, financial management, and other aspects of award administration, there was no office that could assist faculty with understanding and implementing required actions. Similarly, there was no policy manual to give faculty easy reference to governmental requirements for treatment of human and animal subjects, biohazards, or other regulated aspects of research.

It is evident, through quarterly Sponsored Research Newsletters published prior to capacity building, that the DSU Director of Sponsored Research was attempting to provide guidance to the faculty. Such newsletters are limited, however, for reasons such as funding and time, by their infrequent publication and their breadth in addressing the many *potential* interests and needs of the full faculty. The capacity building would presumably facilitate the staffing of an office that could administer sponsored programs more uniformly and address the specific needs of faculty members more precisely than had been possible prior to 1992.

3. Strength of Programmatic Infrastructure for Conduct of Sponsored Programs

As an 1890 Land Grant institution, DSU has always had research and community service as part of its mission. Accordingly, for decades, the programmatic infrastructure of the institution has included facilities and faculty for the preparation of students to go into graduate school and science careers. Also, Institutional Review Boards (IRBs) and other critical elements of the infrastructure had been in place since the 1970s. Like most HBCUs, however, the major emphasis of the institution has consistently been the training of its students, with particular attention to the needs of African-American students in the state of Delaware. As a result, according to interview data collected for the evaluation site visit for the *HBCU Capacity Building Program*, the physical facilities within this infrastructure had become outdated and inadequate for the conduct of research that would merit competitive funding or publication.

In an institutional effort that was separate from, but simultaneous with, the PHS-supported capacity building, DSU addressed many of the weakness in its science infrastructure by constructing a state-of-the-art science center. The new science center was completed in the Autumn of 1995. Completion of this new facility, along with modernization of the library and the institution's distance learning facilities, represent even greater capacity for faculty to engage in externally funded projects.

Considering the short time period in which the new facility has been operational, it is not yet possible to determine whether such advancements have had significant impact on sponsored programs involvement at DSU.

4. Initial HBCU Expectations for Use of PHS/OMH Support

The original program application from DSU specifies a list of nine major accomplishments that the institution expected to achieve, in line with the announced PHS intent for capacity building:

- Helping faculty with pre-award and post-award activities for grants and contracts;
- Aiding in the development of applications and in the preparation of supporting documents, certifications, etc.;
- Serving as liaison between the institution and various agencies;
- Identifying new and innovative methods of obtaining support for the institution, such as through attendance at conferences and symposia;
- Assisting faculty with the revising of disapproved or unfunded proposals to strengthen the weak areas;
- Working with the administrators to obtain release time;
- Working with the Business and Finance Office at the college to get financial reports submitted on time;
- Helping the faculty to better understand the review process and programmatic procedures at key funding agencies; and
- Strengthening the research skills of students and providing role models so that more students will be inclined to proceed to graduate and professional schools.

In addition, the program applications lists a variety of specific aspects of the administrative infrastructure that would be implemented with PHS support. These other

aims, which are variously labeled as "objectives," and/or "milestones," include the following types of actions:

- Establishment of an OSP Advisory Committee to guide and evaluate the OSP;
- Acquiring appropriate computer equipment for the OSP;
- Hiring appropriate staff to support the OSP Director;
- Developing a research interest profile on each member of the faculty;
- Developing and/or improving internal processing forms, and training faculty in their use;
- Producing a Sponsored Programs Handbook, as a comprehensive resource on the functions of the OSP, development and processing of proposals that meet the requirements of PHS and other agencies, all required pre-award and post-award procedures, patenting of inventions, IRB procedures, indirect costs, and the differences between grants and other types of funding;
- Guiding faculty in meeting the State of Delaware's requirements pertaining to the legislature's official clearance of programs sponsored by out-of-state sources;
- Preparing and distributing monthly newsletters regarding sponsored programs issues;
- Providing workshops for the faculty in grant acquisition and other sponsored programs topics;
- Seeking out contacts with industries and businesses as other sources of funding;
- Providing travel funds for faculty to attend professional meetings and to visit federal agencies regarding potentially fundable projects;
- Establishing a grants and contracts resource center for faculty; and
- Reviewing proposals prior to their submission.

It is notable that the DSU objectives and milestones did not explicitly address program audits, assistance with report preparation, or other aspects of post-award administration that were included among the PHS program objectives. The DSU objectives simply make a general reference to an intent to work with the Office of Business and Finance to facilitate timely reporting.

Other expectations expressed in the original DSU application indicate the institution's potentially measurable goals for capacity building. These focus largely on numerical targets for increasing the number of submissions, the number of funded projects, and the number of faculty involved with sponsored programs. These goals appear to have been modestly realistic, such as increasing the number of funded proposals from 10 to 15 within the first year, and to 20 or more by the end of the fourth year. It is not clear, however, whether these targets referred to the number of funded projects on campus during a given year, the number of new awards processed during each year, or the cumulative number of awards over multiple years of capacity building. These goals were never clarified, as the institution's annual progress reports focused only on the objectives and milestones.

5. Interventions Conducted Under the Capacity Building Program

a. Overview of the Program as Implemented at DSU

The actions taken in the implementation of the OSP at DSU were largely consistent with the aims of PHS and the expressed intent in the institution's 1992 program application. The first annual progress report briefly summarizes progress by stating that "six of seven objectives listed for year 01 have been completed" (page 12). More specifically, the OSP's internal checklist indicates the following progress within the first year:

- Establishment and staffing of the office with 3 full-time staff and 2 part-time student assistants;
- Establishment of a resource library within the OSP;
- Establishment of mechanisms for acquiring and disseminating information and required forms;
- Production of a standard routing form for proposals;
- Routine acquisition of required signatures for proposals;
- Monitoring of project expenditures, ensuring their allowability; and
- Assisting with the identification of needed matching funds.

In addition to these advances, the OSP reported that planning had begun in year 1 on key elements such as the handbook of policies related to sponsored programs, developing on-line search capabilities within the OSP, establishing a policy for proposal tracking, preparing budgets and other forms, assisting directly with the writing and production of proposals, implementing proposal writing workshops, and assisting faculty with agency contacts. Subsequent progress reports for years 2 and 3, along with interview data gathered in February of 1997 for the program evaluation, indicate that the planned actions were implemented, with the following variations:

- The OSP newsletter was published on a bi-monthly schedule, rather than monthly,
- Budgetary matters are referred to the Office of Business and Finance for review,
- The OSP does engage in a limited post-award role that includes sending reminders to Principal Investigators (PIs) 90 days and 30 days prior to the deadline for required reports;
- Other post-award functions, particularly related to financial management or close-out of projects, are handled by the Office of Business and Finance; and

- All proposals are reviewed for required elements and editorially by the Director of the OSP before being approved for submission, but limited resources permit little other assistance to PIs in the technical development and production of proposals.

In addition, the OSP engaged in other activities to help PIs with the acquisition of external funding. This included the sponsored annual workshops on proposal writing and budget preparation. It also included accompanying PIs to the state legislature's "clearinghouse," held each month to give legislators an opportunity to question PIs and other recipients of out-of-state program funds about the nature and purpose of their funded activities.

It should be noted that part of the program implementation, which included the designation of the former Director of Sponsored Research as the full-time Director of the OSP, was somewhat atypical. As stated in the first annual progress report, the Director's role included continued attention to her ongoing research activities, as well as occasionally helping with the technical aspects of some PI's proposals in the sciences. Also atypical is the fact that the OSP at DSU was placed within the Division of Graduate Studies and Research. Thus, the now OSP Director also has the title of Associate Dean of Research, placing her in a hierarchy beneath the Dean, the Vice President of Academic Affairs, and the President. Both the OSP Director and the President describe an "open door" policy, by which the OSP Director can freely contact the President at any time regarding sponsored programs issues. Even, so the positioning of the office is at least one layer lower in the institutional hierarchy than is typical among the dozens of institutions with which the evaluation team members have worked previously.

As part of the capacity building program evaluation, a site visit was conducted at DSU in 1997, for the purpose of making direct observations of the OSP, its operations, and its facilities. As a result of that visit, information was compiled regarding the

recordkeeping and informational functions of the office, the physical layout of the office, and the staff, as detailed below.

b. OSP Administrative Recordkeeping and Correspondence

As indicated in the itinerary presented previously, considerable attention was given to a review of the facilities and records of the OSP. In general, the records of the office were well organized. The OSP staff had already developed a Lotus database of the project information, facilitating the review of the University's record of applying for and obtaining external support during the period from 1992 to the present. Unfortunately, no clearly reliable information was available for the projects which had been launched prior to the funding of the OSP. For each project since July of 1992, the OSP has been responsible for tracking the activity from the time of submitting the State Point of Contact (SPOC) form required by the state of Delaware. The SPOC form gives state legislators an opportunity to review any new funding that the university brings from outside of the state, including many types of Federal support. Thus, the date of the SPOC submission provides a rough approximation of the submission date for about half of the sponsored programs at DSU. For the other projects, including those funded from within Delaware and any continuations or renewals of pre-1992 programs, the OSP's Lotus database appears to indicate only the fiscal year in which the *award* was made for funded projects, and the year in which the *submission* was made for unfunded projects. Thus, the project profiles consistently included the following descriptive information:

- Project title;
- Principal Investigator (PI) name;
- Academic Department of PI;
- Funding agency;
- Award date of each funded proposal;

- Submission date of each unfunded proposal;
- Amount requested in each proposal; and
- Amount awarded for each funded proposal.

It should be noted that the OSP is responsible for competitive grants and contracts. This responsibility does not include the administration of support from Title III of the Higher Education Act, or from formula-based support that the U.S. Department of Agriculture (USDA) provides to Delaware State University as an 1890 Land Grant institution.

In addition to the project profiles, the OSP staff provided the following important materials to demonstrate the progress and functions of the office:

- Draft of the *Research Capabilities* summary;
- Draft of the university's *Intellectual Property, Technology Transfer & Entrepreneurial Activity Policy and Procedures* manual;
- Policy manual for PIs, including the *Principal Investigator's Handbook*, the *Post-Award Fiscal Administration Handbook*, and the *Compliance Policy Handbook*;
- Sample OSP newsletters; and
- Sample of the routing slip/Faculty Release Time Report, circulated along with any proposal as it is approved by each administrative level of the university for submission.

c. OSP Facilities

The site visit included a review of facilities used for the administration of sponsored programs. The OSP is housed in a cottage at the southeastern edge of the campus, a building shared with the Dean of Graduate Studies and Research. The OSP space includes two single-occupant offices, used by the Director of Sponsored

Programs, and the Associate Director. In addition, the facility includes a moderate-sized conference room, used for conducting meetings of the OSP staff or groups of faculty, as needed to produce proposals. The OSP also has a small room devoted to the Resource Library, including the following resources:

- A computer with modem for conducting opportunity searches;
- Paper materials, such as the NIH Guide and the Commerce Business Daily, describing Federal programs and funding opportunities; and
- Paper materials describing various Federal agency policies for compliance with project regulations.

In addition, the OSP suite includes a small kitchen area, as well as a storage room closet. The reception area includes a desk for a receptionist/assistant, a desk for the Grants Officer, a waiting area, and project files from 1994 to the present. Earlier project files are kept in long-term storage in a closet within the Director's office. The project files include copies of proposals and application materials, proposed project budgets, and copies of OSP correspondence.

d. OSP Staff

Since the OMH support for the OSP has ended, DSU has succeeded in financially supporting the staff and functions of the office. As of the time of the site visit in January of 1997, that support derived from the commitment that the President of the university has made to the OSP. The increased revenue from indirect expense awards is viewed by the President as a major factor in making this commitment feasible. However, the university's formula for distribution of indirect expenses still did not specifically include the OSP, the School of Graduate Studies and Research, or the Division of Academic Affairs. The OSP or the Dean of Graduate Studies and Research received a fixed percentage of indirect funds only for grants awarded to PIs within those offices. The formula for distribution of indirect funds, as of early 1997, was as follows:

- 50 percent to the university;
- 30 percent to the PI, for professional or institution-related uses;
- 10 percent to the PI's department; and
- 10 percent to the PI's School.

Given this formula, it is clear that the university's commitment to the OSP as a line item in the university budget is not necessarily supported simply through the indirect expense recovery from externally funded projects. It is also noteworthy that the OSP is not part of the state's line-item support for components of DSU.

The support that is currently available to the OSP allows the office to have the three full-time staff members plus two part-time students. The full-time positions are those already mentioned: Director, Associate Director, and Grants Officer. In addition, the OSP has a vacant secretarial position which would normally be shared with the Dean. These positions are fairly fluid, ensuring that tasks are addressed as needed. Each position does, however, have its own focus, as follows:

- The Director focuses largely on pre-award activities, including opportunity searches, identifying needed matching funds, obtaining required signatures, and reviewing all proposals.

- The Associate Director focuses on the tracking of projects that have been funded, as well as putting together a bimonthly newsletter that informs faculty of OSP services and potential funding opportunities.

- The Grants Officer focuses on issues of regulatory compliance, including development and updating of compliance manuals, coordinating Institutional Review Board (IRB) meetings, entering project data into the tracking system, and occasionally reviewing proposals and budgets.

6. Needs Addressed by the Capacity Building Program

Interviews with faculty suggest that the OSP has provided very satisfactory service to many PIs, meeting their needs for administrative support, especially in

pre-award functions. One experienced PI indicated that all of the services of the OSP came as welcome support, despite his prior success in obtaining grants. He specifically cited the fact that the OSP provides timely notices to faculty about available funding, application procedures, and deadline dates. Having such information from a reliable source saves faculty time that can, in turn, be used for better or increased program implementation. The OSP also assists faculty by providing standard boilerplate materials about the institution, and by ensuring that application forms and assurance materials are properly completed. In some cases, the expert assistance from the OSP has led to larger grant awards and a greater variety of funding sources for faculty to pursue.

In addition to direct assistance with the acquisition of specific projects, the OSP plays a welcome role in faculty development, through its own workshops and through the promotion of workshops presented by the Center for Excellence in Teaching (CET). These workshops address strategies of proposal writing, budget preparation, and identification of a greater variety of funding opportunities. It should be noted that the CET is headed by the faculty member who received sponsored programs administration training in Project TAPS, which included training in those same topic areas. In other respects, however, interview data suggest that the CET was not involved in any aspects of developing or operating the OSP. Despite the potential benefits that may have come from greater involvement of the CET Director with the OSP, it is evident that she limited her involvement in order to minimize political conflicts between key administrators, thus keeping the CET functionally distinct from the OSP.

Interview data point to several additional needs that have been met by the development of the OSP and through its operation, including the following:

- Developing the formula for sharing of indirect cost recovery with PIs and their divisions, facilitating equipment purchases and other programmatic investments;

- Helping faculty to meet requirements for promotion and tenure, by easing the process of getting involved with publishable research;
- Providing a centralized location for inquiries related to sponsored programs administration;
- Helping faculty to get through the "red tape" by providing assistance that was not available through other administrative offices on campus;
- Ensuring that release time and matching funds are available to PIs, in accordance with their funding requirements; and
- Providing a general sense of accommodation that is not available at many other institutions, where faculty are left on their own to pursue and manage external funding.

Taken together, these observations of faculty members ultimately indicate that the capacity building program provided to DSU a much needed Office of Sponsored Programs, with appropriate staff and facilities to give meaningful assistance to individuals who desire assistance in obtaining external funding. It should be noted, however, that these observations come from a small, non-random cross-section of the faculty, all of whom had been successful in working with the OSP to get funding. Consequently, it is not possible to gauge the extent to which the OSP meets the cited needs for the faculty as a whole, although evidence suggests that the office may be meeting its stated goal of serving approximately 30 percent of the faculty each year, at least in the processing of proposals.

It is also important to point out that the *HBCU Capacity Building Program* was designed to address the technical assistance (TA) needs of the participating HBCUs in implementing their new administrative infrastructures. The available interview data, progress reports from federally contracted TA providers, and annual reports from the OSP indicate that such assistance was plentiful as part of the program, especially during the first two years. The DSU OSP Director has even continued to have frequent contact with one of the TA providers since the end of the capacity building program, as

well as with the network of other sponsored programs administrators in the National Council of University Researchers Administrators (NCURA) and the Society for Research Administration (SRA). Records also show that OSP staff traveled to other institutions to observe the structure and functioning of their sponsored programs offices. In addition, the PHS Program Officer made annual visits to DSU to gauge progress and ensure appropriate support from top administrators. Interviewees state that this assistance was extremely valuable in expediting the design and implementation of standardized procedures, forms, manuals, resource library holdings, computerized tracking of projects, and project files. The TA providers also helped the OSP to negotiate its role at the institution, particularly relative to the Office of Development as the other major office seeking external funds for DSU. Thus, the TA was a programmatic feature that addressed many important needs of the OSP.

7. Relevant Needs Not Addressed by the Capacity Building Program

While the OSP clearly makes a contribution to the pre-award process, taking prior burdens from the faculty, the available quantitative data suggest that DSU has made somewhat inconsistent progress toward the intended goal of increased participation in externally sponsored programs. Those indicators, which are consistent with measures by which the OSP was to be internally evaluated, include the following:

- Rather than achieving a steady increase in awards, or at least increasing towards a clear plateau, the number of awards at DSU rose and fell erratically over the four years of the capacity building, as illustrated in Figure 14;

- Similarly, the dollar amount of total awards received each year was erratic, with a fourth-year total that is only about 72 percent of the first-year total, as shown in Figure 15; and

- Faculty participation, which was regularly cited as a challenging "issue" in the OSP's annual reports, rose for the first three years of capacity building, only to return to first-year levels during the fourth year, as shown in Figure 16.

Figure 14

Number of Competitive Awards and Continuation Awards Received by Delaware State University, by Year of Capacity Building

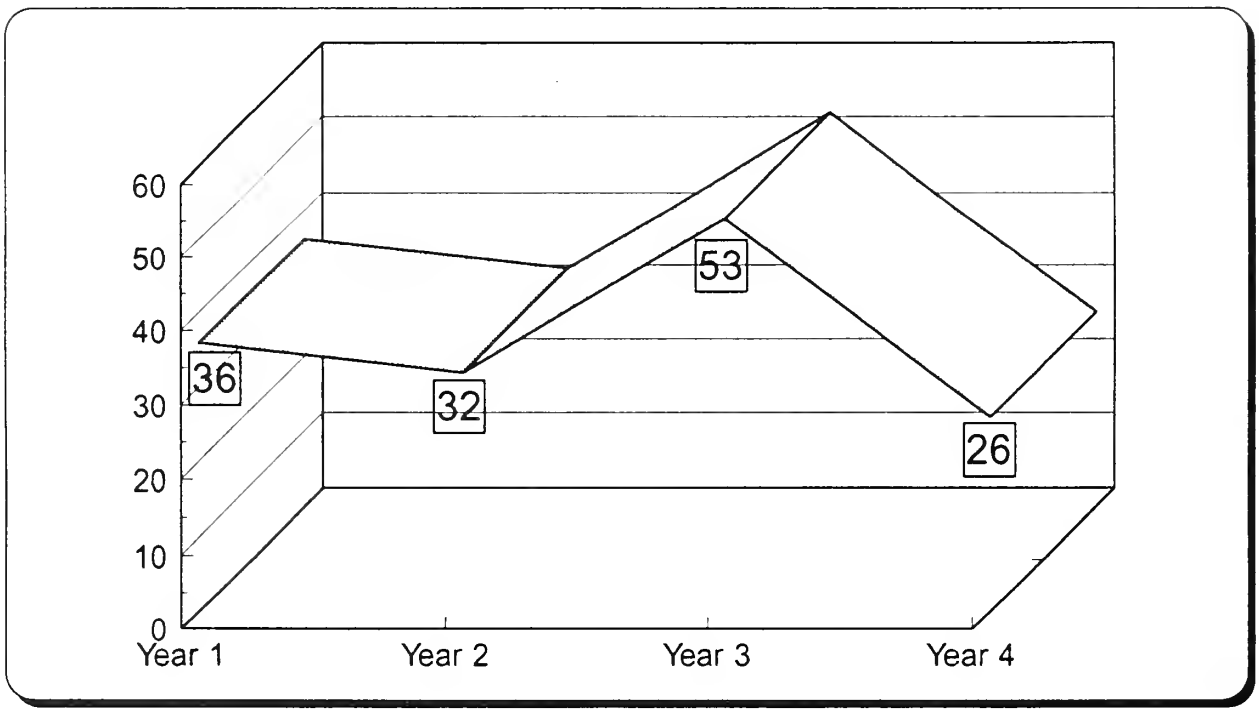


Figure 15

Dollar Amount, in Millions, of Competitive Awards and Continuation Awards Received by Delaware State University, by Year of Capacity Building

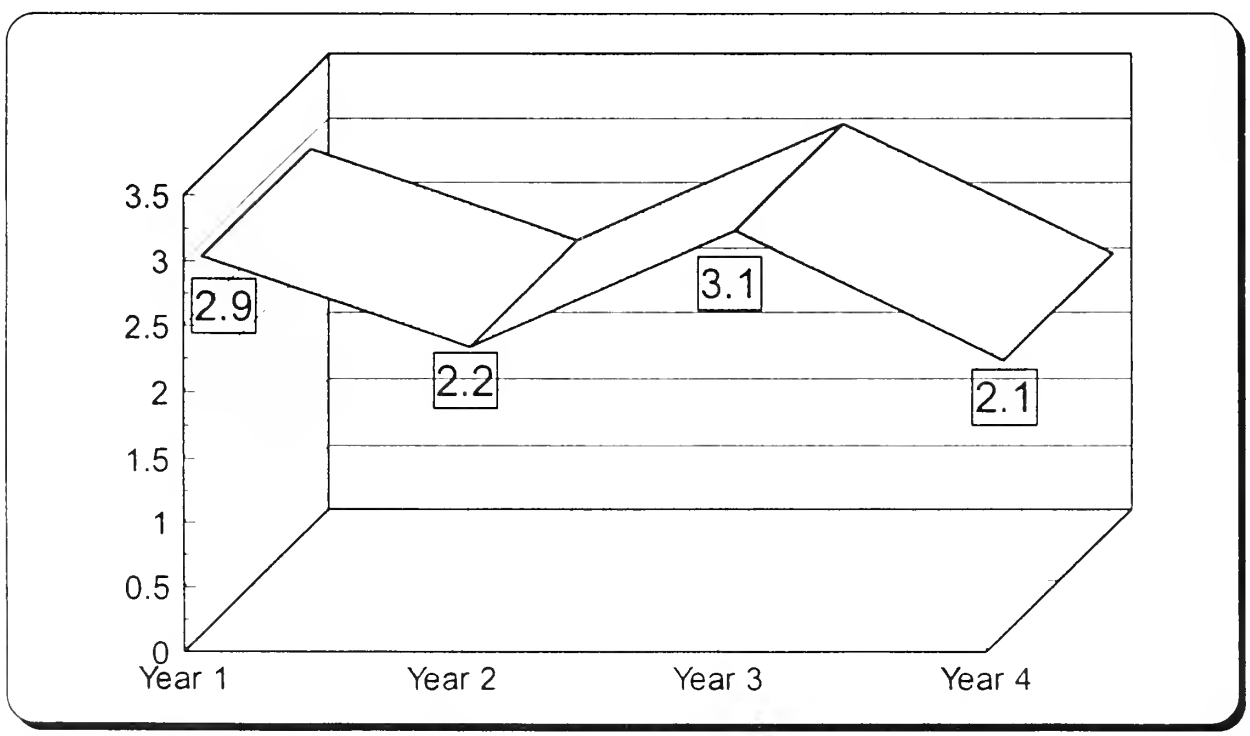
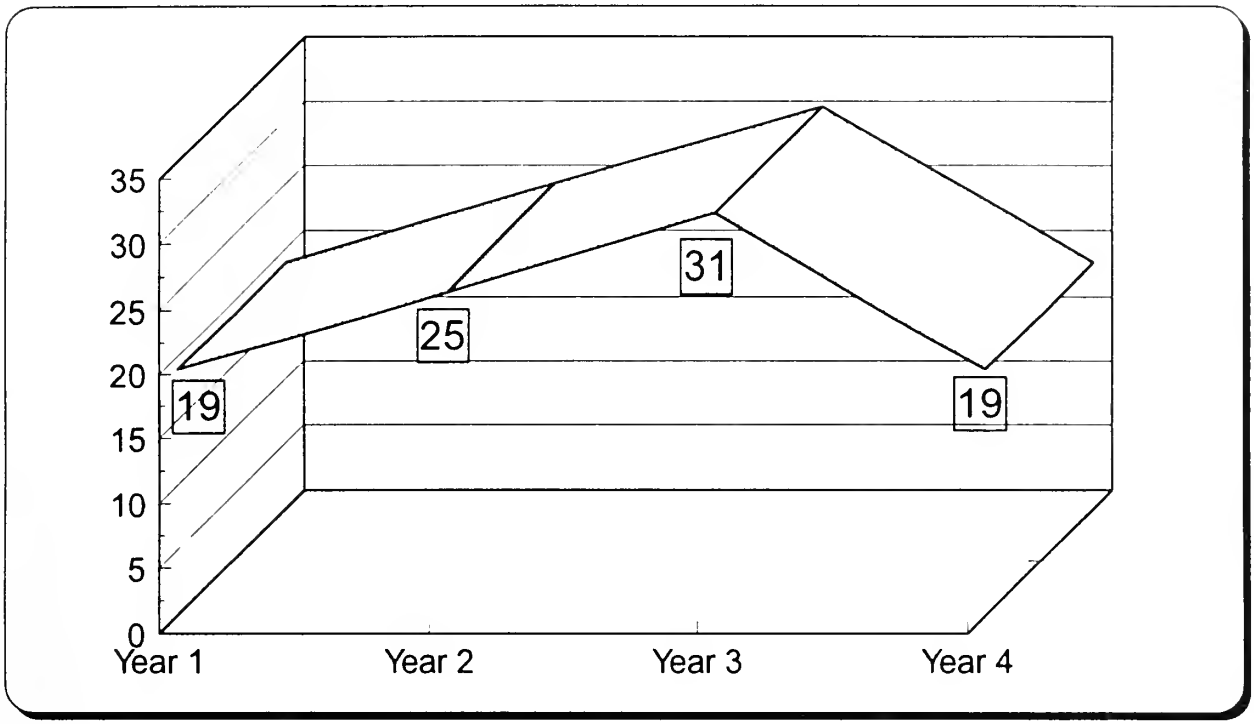


Figure 16

Number of Delaware State University PIs Receiving Competitive Awards and Continuation Awards, by Year of Capacity Building



While these quantitative data show no sustained gains over the four years of the capacity building program, it is important to recognize that these data may simply illustrate an early plateau reached by the OSP. In the original program application, DSU indicated that the institution had been averaging fewer than 10 awards per year and less than a million dollars per year in sponsored program funding. According to the OSP staff, the pre-capacity-building project data are probably incomplete and, therefore, may have underestimated the true level of prior participation in sponsored programs. Interviewees generally agreed, however, that the number and dollar amount of grants and contracts received by DSU has been consistently higher during the capacity building program than it was prior to the program. Thus, Figures 14 through 16 may reflect very positive effects of PHS/OMH-supported capacity building, along with the effects of the efforts by the institution to have a part-time sponsored programs

administrator in the year prior to capacity building. The pre-program efforts may have created momentum leading to an immediate rise to a plateau in the first year of capacity building, rather than an anticipated steady increase during the four-year program.

While it is possible that the data reflect important gains in the first year of capacity building, it is not clear why DSU had difficulty maintaining steady progress on these key indicators. Most notably, the receipt of awards by only 19 PIs in year 4 may be better than in pre-program years, but it is still only 11 percent of the 179 faculty members at DSU in 1996.

The site visit interviews did touch on this issue of low faculty involvement. Faculty indicated that there are some professors on campus who do not want help or "interference" from the OSP, but this is not a widespread sentiment. Faculty and administrators suggest that the teaching-focused culture on the DSU campus has been a persistent detractor from research activities, despite the very visible promotion of research through the OSP, communications from the President, appropriate policies for release time, and the opportunity to win "Research Excellence Awards" that include cash bonuses. The institution also has a collective bargaining agreement with its faculty, through which research activities have been negotiated as a significant part of the promotion and tenure criteria. These incentives, the improved programmatic facilities, and the improved administrative infrastructure have yet to yield stable results. Data from the OSP project records show that a total of 50 different persons served as PIs during the four-year program, including 31 PIs in year 3 alone, making it still less clear why there were only 19 PIs at DSU in year 4, out of a faculty of 170. None of the available data provide explicit, compelling answers on this issue, other than statements by OSP staff that it is difficult to get faculty to participate in sponsored programs.

Without direct evidence for the causes of limited achievement of the PHS-defined program objectives by the OSP at DSU, there are a few findings that might be considered as potential explanations:

- Given her prior position as Professor of Biology, the Director had initially focused her attention primarily on assisting science faculty;
- In avoiding the image of contributing to bureaucratic red tape and "interference," the OSP has consistently pursued a passive strategy of marketing itself to faculty, much as is true at other institutions, counting on word-of-mouth, newsletters, and occasional targeted memoranda to keep faculty aware of available OSP services; and
- The post-award procedures at DSU are largely structured so that faculty must work with the Office of Business and Finance, which is reputed to be more typically bureaucratic than the more user-friendly OSP.

In short, it is possible that the OSP is simply not marketed aggressively enough to convince faculty of the many benefits of participating in sponsored programs through the OSP. It is also possible that PIs find post-award project administration to be too challenging, despite the improved pre-award process in the OSP, so that faculty are not inclined to continue the pursuit of additional grants or contracts. Such possibilities point to the need to conduct, at some future date, a much more in-depth study of the incentives and disincentives that drive faculty participation in sponsored programs at DSU and elsewhere.

8. Summary of Outcomes Indicating Program Success

The clearest indicator of program success at DSU is the fact that the university now has an administrative infrastructure for sponsored programs that is far more comprehensive than what existed prior to the capacity building program implemented by PHS and OMH. Of the many functions, outlined previously, that define the PHS intent and DSU's original intent for the OSP, it is evident that all of the pre-award functions have been established It is also evident that standard policies and

procedures have been established for post-award functions, although faculty still refer to "red tape" in reference to dealing with the Office of Business and Finance on post-award administration. The OSP is considered to be much more user-friendly as a service provider.

Another indication of success, as mentioned previously, is the fact that the institution's performance in obtaining grants and contracts was consistently higher during all four years of capacity building than is indicated in data for pre-program sponsored programs involvement. The average number of awards during the program was 37 awards per year, with an average total of $2.6 million for all awards per year. This compares very favorably with the figures in the original program application, citing only 8 awards per year at $0.8 million per year for the three years prior to capacity building. The major problem with this comparison, however, is that OSP staff express little confidence in the completeness of pre-program data, which were not systematically maintained prior to the creation of the OSP. As a result, the pre-program estimates are thought to be negatively biased, due to missing project data.

Unfortunately, despite the significant advances made at DSU in developing the OSP, there is little other evidence that the OSP has had the impact that was intended, as measured in accord with the PHS-defined program objectives. The faculty participation and dollar amounts received through sponsored programs in year 3 provide distinct evidence that the university has acquired at least the capability for an increased acquisition of program funds from external sources. What is not clear is whether those elements have been assembled or managed in a manner that can increase and sustain faculty interest and activity in sponsored programs. Given the lack of any clear trend in the relatively reliable DSU data from the four years of the program, it may not be possible to gauge the success of capacity building at DSU until more time has elapsed, giving more opportunity for the OSP to appeal to more faculty members.

In summary, the currently measurable success of the *HBCU Capacity Building Program* at DSU is not as complete or as clear as anticipated in the program hypotheses. Even so, there are distinct indications that DSU succeeded in developing its OSP, complete with the intended functions of sponsored programs administration. It is also apparent that, since the first year of capacity building, DSU has had greater success in acquiring grant and contract awards than in the three years prior to the program. Other potential indications of program success include the following:

- Faculty interviewees express a high level of satisfaction with the services provided by the OSP, and report negligible political resistance to the OSP's activities;
- The OSP is a visible and active representation of DSU's commitment to research and proper administration of research, easing the process of obtaining funding from external sources;
- Two faculty members have recently won "First State" awards from the state of Delaware for their success in obtaining large grants for cutting-edge research at DSU; and
- Administrators and site visit observations indicate that the OSP has brought DSU regional recognition as a resource for acquiring and managing financial support for projects that serve the local community.

9. Summary of Extra-Program Factors Affecting Program Outcomes

Given the thrust of available information on DSU's sponsored programs acquisition during the four-year capacity building effort, it is important to consider whether forces outside of the *HBCU Capacity Building Program* had a constraining or suppressing influence on the program impact. The annual reports and other data suggest that there were three potentially counter-productive influences that emerged at the very beginning of the program. They are as follows:

- Administrative conflicts within DSU, pointing to the need to carve out a cooperative and non-threatening position of the OSP relative to other offices on campus, such as Development, and Business and Finance;

- The positioning of the office under the Dean of Research, giving the OSP a somewhat more subordinate position than is typical for sponsored programs administration and, thus, creating more opportunity for attention to be distracted towards serving the needs of the Dean; and

- The provision of comprehensive training to another faculty member on campus, specifically on issues of setting up and operating a sponsored programs office, which may have created some misunderstanding between that trained faculty member and the OSP Director, as well as elsewhere on campus, regarding the role that the trained faculty member could play when the OSP responsibility had already been assigned.

In summary, these three factors that were external to the capacity building program, all of which were surfaced during site visit interviews, may have slowed or dulled the impact of the capacity building effort. The interview data and other records indicate that, individually, each of these issues was considered minor in its impact on the OSP. However, it is apparent that, in combination, they may have undermined the position of the OSP and its Director. Thus, while DSU experienced some measurable advances as a result of the capacity building, there is ample reason to hypothesize that the impact of the program might have been greater if the OSP and its Director had not been distracted by these external challenges.

C. SAINT PAUL'S COLLEGE CASE HISTORY

1. Pre-Program History of Administrative Infrastructure for Sponsored Programs

Among the four institutions that participated in the PHS/OMH *HBCU Capacity Building Program*, Saint Paul's College (SPC) is, by far, the smallest in enrollment and in the size of its faculty. It is also the only private institution in the group. The institution was started in southern Virginia as the Saint Paul Normal and Industrial School in 1888 as part of the outreach mission of the Episcopal church. At that time, the primary purpose of the school was to provide a basic "English" education and training in a trade for recently emancipated slaves. By 1942, a four-year baccalaureate program had been established to train teachers. Ultimately, in 1959, movement had progressed in the development of a full liberal arts curriculum, leading to the designation of the institution as Saint Paul's College. As a private, church related institution, this process of development at SPC was largely dependent on the ability of each President of the institution to acquire financial support from friends, as well as from officials of the Episcopal church. More recently, considerable support has come from SPC's membership in the United Negro College Fund (UNCF), which has helped in providing funds for capital improvements, scholarships, and the consequent ability to recruit students and faculty of higher quality.

Clearly, the history of SPC has been that of a four-year teaching institution. The current mission statement of the college emphasizes the importance of providing valuable learning experiences to students. Research is mentioned in the mission only as a component of the teaching/learning process. Thus, it is not surprising that SPC, prior to participating in the *HBCU Capacity Building Program*, had minimal involvement with externally sponsored programs for research or service activities. Given the small size of the institution, there was little perceived need for sponsored programs administration to be separate from the general fundraising activities of the college's

Development office. Also, as one administrator stated during site visit interviews in January, 1997, the few research-related grants obtained by faculty members were typically viewed as "their" individual grants, rather than "our" institutional grants. Such an uninvolved attitude of administrators even extended to a relative lack of concern if individual faculty members were unable to renew "their" grants. Such focused programmatic grants had not traditionally been viewed as significant in maintaining the financial viability of SPC. The institution's attention was turned primarily towards the acquisition of funds for the improvement of facilities or the expansion of training programs, as is evident in the project records that were centrally maintained between 1986 and 1992.

The movement towards recognizing the value and importance of sponsored programs at SPC, in contrast with fundraising, appears to have begun with the an appointment to fill a vacated Title III Director position at the college in 1987. This individual recalled during an evaluation interview that, when he was a newly appointed director, the Title III experience stimulated his personal interest in finding additional sources of program funding. His interest increased further when a newly hired staff person, coming from a recent job at DHHS, suggested that the Extramural Associates (EA) Program at NIH would be an excellent way of learning more about external program funding and how to acquire it. The SPC Title III Director succeeded in obtaining an EA Fellowship early in 1992. One requirement of the EA program was that the President of the college had to commit SPC to the support of the EA Fellow in developing a sponsored programs office. Shortly after he completed his EA training, the Director of the EA program alerted him to the upcoming PHS capacity building program. Thus, at SPC, the availability of the PHS support was very timely as a means of meeting its EA commitment to develop a sponsored programs office.

The participation of SPC in the *HBCU Capacity Building Program* in 1992 appears to have been a logical step in a process that had begun at the college a few

years earlier. However, the college clearly faced the following significant challenges in making the most of PHS support for a new sponsored programs office:

- Very little institutional experience with the acquisition and management of sponsored programs, as compared with institutional development fundraising;
- Virtually no institutional experience with contracting;
- Little awareness among faculty of institutional policies and procedures for obtaining and managing sponsored programs;
- Limited institutional experience in the financial administration of project-specific grants or contracts;
- Little office space previously devoted to the "Office of Federal Programs" for centralized administration of sponsored programs, which was mostly the administration of Title III Programs and one NSF grant;
- A small campus with aging laboratories and limited programmatic infrastructure, as discussed in the next sub-section; and
- A small faculty, growing from 39 in 1992 to 42 in 1997, significantly limiting the maximum number of possible sponsored programs and associated indirect cost recovery that might help to support an administrative staff and facility for obtaining and managing sponsored programs.

2. Extent of Past Involvement in Sponsored Programs

As stated above, prior to creation of the Office of Federal and Sponsored Programs (OFSP) in 1992, SPC had very little involvement with sponsored programs. In an effort to document the college's prior program experience, the director and his OFSP staff assembled a list of sponsored programs dating back as far as July of 1986. The list includes the following types of grants obtained by SPC between July of 1986 and October of 1992:

- 5 grants to expand or continue existing training programs for students;
- 3 construction, renovation, or physical plant improvement projects, including a planning grant for certain improvements;
- 2 grants for faculty development activities, plus an Intergovernmental Personnel Assignment (IPA) for the EA program;
- 2 acquisitions of equipment for laboratories, classrooms, or other program facilities;
- 2 grants to support the implementation of a workshop or seminar;
- 2 grants to support social services provided on campus;
- 1 grant to support an artist-in-residence;
- 1 foundation grant; and
- Annual renewals of the Title III program for strengthening HBCUs.

What is most notably absent from this pre-program list is any support for competitively funded research activities. However, the list does demonstrate some prior experience in sponsored programs, with potential strengths in the provision of training programs, including workshops and seminars, as well as the provision of social services such as child care and the treatment of substance abusers.

It should be noted that the OFSP staff did not express great confidence in the comprehensiveness of the pre-1992 list of sponsored programs. Interviewees were concerned that some faculty may have had grants for which records were not centrally maintained after their completion. Thus, the college may have had further strengths with which to capitalize on the presence of the new sponsored programs administration. It is also unclear, however, whether there were any existing trends in the rate at which SPC had been acquiring sponsored program funding prior to 1992. Faculty and administrators simply report that there was little involvement in sponsored programs, as is apparent from data showing that only 5 programs were funded during the first year of

the PHS/OMH support. Faculty and administrators also report that there was not a widespread understanding of the process of acquiring grants and contracts, and little understanding of the benefits that might come from active pursuit of grants and contracts. In fact, at the start of the PHS/OMH funding for the OFSP, SPC did not have an established indirect cost rate, reflecting the lack of understanding of how to obtain appropriate levels of external funding. Interviewees generally credit the initial OFSP Director as having been the driving force in developing the OFSP, conceptually and physically, including the use of PHS/OMH funding to promote a greater understanding throughout the campus regarding the processes and benefits of sponsored programs.

3. Strength of Programmatic Infrastructure for Conduct of Sponsored Programs

When SPC applied for PHS support in 1992, the application emphasized the availability of the following programmatic resources:

- Library resources, including access to on-line search services, and inter-library links to numerous other institutions;
- The Learning Resource Center where students and faculty have access to materials and computer equipment for improving language skills and computer skills;
- The Computer Center, and various workstations throughout the faculty and administrative offices, giving students and faculty access to equipment for training in computer languages and applications, and for word processing and research purposes; and
- Five laboratories serving the Department of Natural Science and Mathematics, including basic equipment with which students may engage in experiments in biology, chemistry, and physics.

The 1992 application narrative also states that a new science facility is to be constructed, with state-of-the-art facilities to support more competitive faculty

research. As of the site visit in January of 1997, preparations had begun for the construction of the facility.

Given the lack of modern science facilities during the period of capacity building, it is evident that the institution's programmatic infrastructure may have been adequate only for the support of relatively low-technology projects. Such a situation makes it understandable that most of the pre-program grant-related activity of the college was directed toward the acquisition of equipment and the improvement of facilities. This is also consistent with the continued low involvement with externally funded research activities. Under these circumstances, the case of SPC raises an important question for the evaluation of the *HBCU Capacity Building Program*: Is it possible or feasible to observe significant improvements in HBCU capacity if the building of administrative infrastructure precedes the development of a competitive programmatic infrastructure? As discussed in the sub-sections below, the answer appears to be "Yes," but with major limitations on the types of activities that can be funded.

4. Initial HBCU Expectations for Use of PHS/OMH Support

Given the small size of SPC, it was feasible for the original application to propose activities that would thoroughly explore the research interests of all faculty and assess the needs of faculty for OFSP assistance. The proposal outlines 15 activities on which the OFSP would focus during the first year of PHS support, most of which appear to be preparatory in nature, such as conduct of a needs assessment, and review of existing policies for sponsored programs administration. The proposal also includes the establishment of committees to guide the development and implementation of legal and appropriate institutional policies and guidelines for administration of sponsored programs. Amidst these preparatory activities, the first-year agenda, includes the following basic functions of a sponsored programs office:

- Identifying faculty capabilities and interests in the conduct of research and other activities;
- Accompanying faculty on site visits to federal agencies for the purpose of establishing a clearer understanding of how faculty might participate in agency-funded programs;
- Use of on-line resources to identify potential funding sources for faculty;
- Participating in the preparation of grant applications; and
- Assisting in the review and formulation of institutional policies for sponsored program administration.

The OFSP was also designed to engage in certain other activities that would facilitate the involvement of faculty in sponsored programs, such as the following:

- Conduct of workshops regarding strategies by which faculty and students might increase their involvement in sponsored programs:
- Appointment of a faculty member in each of SPC's three academic departments to serve as a liaison to the OFSP, meeting regularly with OFSP staff to exchange information about opportunities and needs;
- Developing "boilerplate" materials for use in grant applications;
- Assisting PIs in acquiring necessary space, materials, and personnel for projects;
- Reviewing pre-application and application materials;
- Following up on submitted applications to determine their status;
- Discussing reviewers' comments with PIs;
- Reviewing progress reports;
- Monitoring financial reports and other documents;
- Closing out projects on their completion;

- Assisting in the arrangement of project continuation at the end of a grant period; and

- Updating procedural handbooks and manuals as needed.

This list of anticipated activities of the OFSP is inclusive of most of the major functions that would be expected in a formal office of sponsored programs. The following elements, however, are not specifically addressed in the proposal:

1) Activities related to the pursuit and management of contracts;

2) Activities specifically related to the development of project budgets or auditing;

3) Activities related to the tracking of projects, other than reviewing progress reports; and

4) Specific issues that might merit attention among the institution's internal policies for such things as:

   - Tracking and sign-off during proposal production and submission, and

   - Channeling of indirect cost recovery toward specific uses, although there is a generally stated expectation that such funds would ultimately make support of the OFSP feasible by the end of the PHS/OMH support.

Although these specifics are not included in the proposal, they might be assumed to be accounted for in the statement of "Project Goals, Objectives and Milestones," which begins by simply restating all of the administrative functions that PHS expected the capacity building program to produce at the funded institutions.

The application proposes that SPC would meet the goals and objectives of the project by contributing the space, and the funds for renovation of that space, to develop a six-room suite, including the Director's office, Secretary's office, conference room, research library, storage closet, and rest room. The PHS funding would be used to

purchase office equipment, such as computers and facsimile machines, as well as to cover the salaries of the office staff. The proposal narrative is unclear about the structure of that staff, but budget-related materials mention the following staff persons:

- Director;
- Three Departmental Liaisons;
- Accountant; and
- Administrative support.

The lack of clarity in the planning of office staffing may have created difficulties for the OFSP in its start-up efforts. It is evident, from correspondence between SPC and PHS during the first year of the program, that the structure of the office staff was not finalized until the start of year 2. These issues are addressed in more detail below, in the discussion of the actual program implementation.

5. Interventions Conducted Under the Capacity Building Program

Naturally, the most significant intervention implemented at SPC under the four-year *HBCU Capacity Building Program* was the use of a total of $957,492 for the expansion, equipping, and staffing of the OFSP It should be noted that the OFSP was not an entirely new entity, but was a repositioned and reorganized version of the former "Office of Federal Programs," which had been situated under the Vice President for Development. The positioning of the OFSP under the Vice President for Academic Affairs was not planned in the original program proposal, but was established in response to SPC's recognition, during year 1 of the program, that sponsored programs are very different from the other forms of fundraising that are traditionally the realm of Development. This move was also consistent with information that SPC received from the Technical Assistance Providers engaged by PHS for the capacity building program.

For the most part, the more specific actions taken under PHS/OMH support were consistent with the program aims established in the proposal.

The capacity building program at SPC included the administrative activities of setting up and operating the office, with the support of technical assistance (TA) provided by PHS and OMH. For example, OMH records and OFSP records indicate the following types of intensive TA provided to SPC as part of the program:

- A conference in which the original PHS Project Officer, met with the OFSP Director, along with the Project Directors from two of the other three participating institutions, as well as two consultants, each having experience as sponsored programs administrators who had started new sponsored programs offices;

- Approximately annual site visits by the Project Officer, focused primarily on ensuring the understanding and cooperation of the college president in supporting the OFSP development;

- Approximately five site visits, during the first two years of the program, and occasional telephone calls to the OFSP by one of the consultants, to provide sample documents and guidance primarily on the development of standard procedures for operation of the OFSP; and

- One visit by the Associate Director of the OFSP to the University of Houston, for two days of hands-on experience and observation of the organization and functioning of that sponsored programs office.

It should be noted that the Associate Director of the OFSP was viewed by the TA providers as having made particularly aggressive use of the available assistance. In addition, SPC's Post-Awards Clerk, who was formerly titled as the Administrative Assistant for the OFSP, indicated that the TA provision was extremely valuable for the initial set-up of functional filing systems and tracking procedures. Even so, one TA provider observed that the prior, virtually non-existent status of sponsored programs administration at SPC merited more attention from TA providers than was possible with the resources that were available for TA provision.

The evaluation site visit, conducted in January of 1997 revealed that the OFSP had, indeed, developed functional systems for (1) record keeping and correspondence, as well as (2) a facility that is useful to faculty, and (3) a staff that meets the needs of researchers on the faculty. Each of these three areas of the development of the OFSP is discussed in detail in the sub-sections that follow.

a. OFSP Administrative Recordkeeping and Correspondence

During the evaluation site visit, the records of the OFSP were found to be very well organized. It was evident that the computerized records, maintained in a word-processing format, were quite useful under the current circumstances of SPC having only a relatively small number of funded projects. If sponsored programs activity is to continue to expand, a more flexible database system might be needed to facilitate efficient data access, updating of records, and the addition of other data fields of interest, but these areas were not considered a high priority in the OFSP.

It should be noted that the OFSP is responsible for competitive grants and contracts, as well as for the "entitlement" base of support from Title III of the Higher Education Act. As of 1997, that combined responsibility is more appropriate than ever before, given the fact that HBCUs must now prepare competitive proposals for Title III support, rather than automatically qualifying for funds on the basis of a formula related to student enrollment. Even so, it is important to recognize the fact that SPC, as a small institution, has always combined these functions, making the college somewhat different from the other institutions that were supported under the *HBCU Capacity Building Program*. While it is reasonable for the OFSP to have Title III responsibility, the relatively large dollar amounts previously associated with the entitlement support in the Title III Program might tend to distort the image of the OFSP's success in obtaining competitive funding. Thus, given the intent of PHS and OMH in developing the OFSP,

it is important to give particular attention to competitive funding obtained through the OFSP during the four years of PHS/OMH support.

An understanding of OFSP activities is possible partly through the office's project records for the college. The OFSP has carefully developed and maintained project profiles that aid in the tracking of SPC's success in acquiring and managing sponsored programs. These profiles, which are reported to be complete for funded and unfunded projects sought during the four years of the cooperative agreement with PHS and OMH, include the following important information:

- Project title;
- Principal Investigator (PI) name;
- Funding agency;
- Award date of funded proposals;
- Submission date of unfunded proposals;
- Amount requested in unfunded proposals; and
- Amount awarded in funded proposals.

As another part of its record keeping function, the OFSP also gathered capability information from all faculty at SPC. Subsequently, the OFSP produced the college's *Institutional Capability* statement, which provides a summary of the capabilities of the institution as a whole, the three academic departments, and the individual faculty members within departments.

In addition, the OFSP staff worked with a large committee of 22 faculty and administrators to develop and produce a *Policy Manual* for sponsored programs. This manual documents and standardizes the procedures that all PIs must follow in obtaining and managing externally funded projects. As such, it gives attention to the internal processes of proposal review and project administration, as well as the

government regulations that must be satisfied in the structuring and implementation of various types of projects.

The OFSP also published a monthly newsletter and, approximately weekly, sent out targeted memoranda to inform faculty about the office services and about specific funding opportunities that faculty might pursue. These mailings were in addition to a general brochure, made available to faculty and to potential funders, describing the services of the OFSP.

b. OFSP Facilities

A review of OFSP facilities provides a clear picture of the space that has been devoted to administration of sponsored programs by SPC. The space is more generous than originally proposed. It includes four single-occupant offices, currently used by the Director of Sponsored Programs, the Director's Secretary, the Post-Awards Clerk, and the Director of Title III Programs. In addition, the facility includes a moderate-sized conference room, used for assembling individuals to discuss new project opportunities, to develop proposals in a team setting, and to conduct small conferences or project staff meetings. The college plans to rearrange the conference room so that it will also serve as the Resource Library, with ample space for multiple persons to use the reference materials and on-line resources for identifying opportunities. Currently, the Resource Library is housed in a small office, more suitable for use by one individual at a time. The internet access in the Resource Library is through a single computer terminal with a modem for dial-up connection to a regional internet service provider. In addition, the OFSP suite includes a very small "lounge" or coffee room, as well as a small storage room and a separate file room. The file room is used as a central storage point for all proposals, budget and expenditure records, copies of correspondence, and other administrative records for externally funded projects throughout the college.

The OFSP facilities are located in the building that historically served as a campus hospital, currently reduced to the status of an infirmary. This building is located adjacent to the building where the President's office is currently located. Thus, the OFSP location is fairly central and accessible, especially given the small size of the SPC campus.

c. OFSP Staff

As stated previously, the staffing of the OFSP evolved over the course of the four-year program, reaching its basic complement of four professional persons by the beginning of year 2, including the following positions:

- Assistant Vice President of Sponsored Programs and Director of the OFSP, generally devoting about 75 percent of his time to the OFSP;
- Associate Director of Sponsored Programs, currently known as Director of Title III Programs, as a full-time position;
- Administrative Assistant for Sponsored Programs, currently known as Post-Awards Clerk, as a full-time position; and
- Secretary, working full-time for the OFSP.

These core staff have also been supported by the following positions during the four years of the PHS/OMH support:

- Four part-time Student Assistants each year;
- Three Faculty Liaisons devoting 25 percent of their time to OFSP duties, while maintaining a 75 percent commitment to their regular teaching and research duties;
- Director of Sponsored Programs for Community-Related Projects, a full-time position established in the OFSP budget for year 4; and
- An Accountant, whose services were full-time during the third and fourth year of the program.

As noted above, the Director of Sponsored Programs for Community-Related Projects, who had previously been Assistant Vice President for Development, began his official full-time work with the OFSP in year 4. During years 1 through 3, he had been actively assisting the OFSP in an unofficial capacity by writing proposals for funding of community-service projects. In October of 1996, he replaced the initial Director of the OFSP, who retired shortly after the end of year 4 of the PHS/OMH funding.

Since the OMH support for the OFSP ended, the college succeeded in financially supporting the core staff and functions of the office, with three notable exceptions. First, as of the site visit in January of 1997, the position of Title III Director was vacant, since the departure of the individual who had filled that role and assisted with other aspects of sponsored programs administration since 1993. The departure of the Title III Director coincided with the retirement of the original OFSP Director in the Autumn of 1996. The stated intent of the college was to find a new Title III Director and to continue support for that position. In the meantime, however, SPC did not have the expense of a Title III Director's salary to support through much of the 1996-1997 academic year.

The second significant personnel change is the movement of the Director of Sponsored Programs for Community Related Projects into the role of OFSP Director, officially titled "Director of Sponsored Programs." This change also has the effect of consolidating the "Community-Related Projects" role with the OFSP Directorship. It should be noted that the current OFSP Director does not have the title of Assistant Vice President for Academic Affairs, which had been the title of the original OFSP Director. Based on the site visit interviews, these changes do not appear to have had any adverse effects on the interactions between the OFSP Director and the President or the Vice President for Academic Affairs. The current OFSP Director maintains constant communications with both of these top administrators.

The third significant personnel change is the elimination of the Departmental Liaison roles. This change is not viewed by faculty or administrators as a problem,

given that the liaisons were successful in their primary objective, which was to ensure the development of positive links between the new OFSP and the full community of SPC faculty members. The OFSP staff now serve as direct liaisons to the faculty, which is very practical, given the relatively small faculty of SPC. In short, the staffing of the office has been fairly consistent with the needs of the college, and appears now to be functioning reasonably well at a level that is somewhat reduced since the end of OMH support.

d. Other Interventions

In addition to establishing the basic structure and functions of the OFSP and its staff, the *HBCU Capacity Building Program* at SPC succeeded in providing other specific assistance to faculty, staff, and students, including the following activities:

- A 3.5-hour recognition dinner meeting was held twice each year for all faculty who had participated in sponsored programs or were interested in participating. The event also provided an opportunity to share their experiences with their colleagues.
- The OFSP staff participated in at least one departmental meeting in each of the three academic departments, each semester, to determine faculty needs and to remind faculty about available services.
- The OFSP word-processed proposals for faculty.
- The current OFSP Director administered UNCF scholarships for students, continuing a function that he had performed previously for the Development office.

6. Needs Addressed by the Capacity Building Program

At SPC, the PHS/OMH support was intended to address very serious and deep-rooted needs of the college. There were limited resources and little institutional experience on which to base the development of a productive expansion of SPC's

sponsored programs administration and participation. Clearly, the complete absence of a centralized administrative infrastructure for sponsored programs had limited the ability of SPC to compete for funding. The existence of the current OFSP, and the assembled resources and staff capabilities of the office, represent a significant leap forward in SPC's capacity to obtain and manage external funding for research and other programs. The college now has established policies and assurances that are an absolute necessity for SPC to participate in many federally sponsored programs. The college has also taken the essential action, since the start of PHS/OMH support, of determining and negotiating an indirect expense rate, which will help to ensure the development of realistic project budgets that account for both direct and indirect costs.

Despite the undeniable strengthening of SPC's administrative infrastructure, the early results, during the four years of capacity building, have been mixed. If one of the major aims of SPC's increased pursuit of sponsored programs is to increase revenue for the institution, the results suggest that such a benefit has yet to be achieved. The competitive funding acquired through the OFSP during year 4 of the capacity building was only $800,597, compared to the peak of $1,782,924 achieved during year 2. The amount of competitive funding received for each of the four years of capacity building is displayed in Figure 17. Despite this apparent setback in dollars received, the number of competitive awards received by SPC increased steadily from 5 in the first year of the program to 17 in the fourth year, as shown in Figure 18. The increase in awards was accompanied by remarkable stability in the number of unfunded submissions, ranging between 16 and 19 per year. Taken together, these data suggest that the improved success rate of submitted proposals, along with a wider variety and greater number of funding sources, could be the early steps toward greater success in obtaining sponsored program funding. In short, the administrative infrastructure appears to be functioning well. What remains to be seen is whether the programmatic infrastructure can be improved, as the college has planned, to a point where faculty will be able to compete effectively for greater funding.

Figure 17

Dollar Amount, in Millions, of Competitive Awards and Continuation Awards Received by Saint Paul's College, by Year of Capacity Building

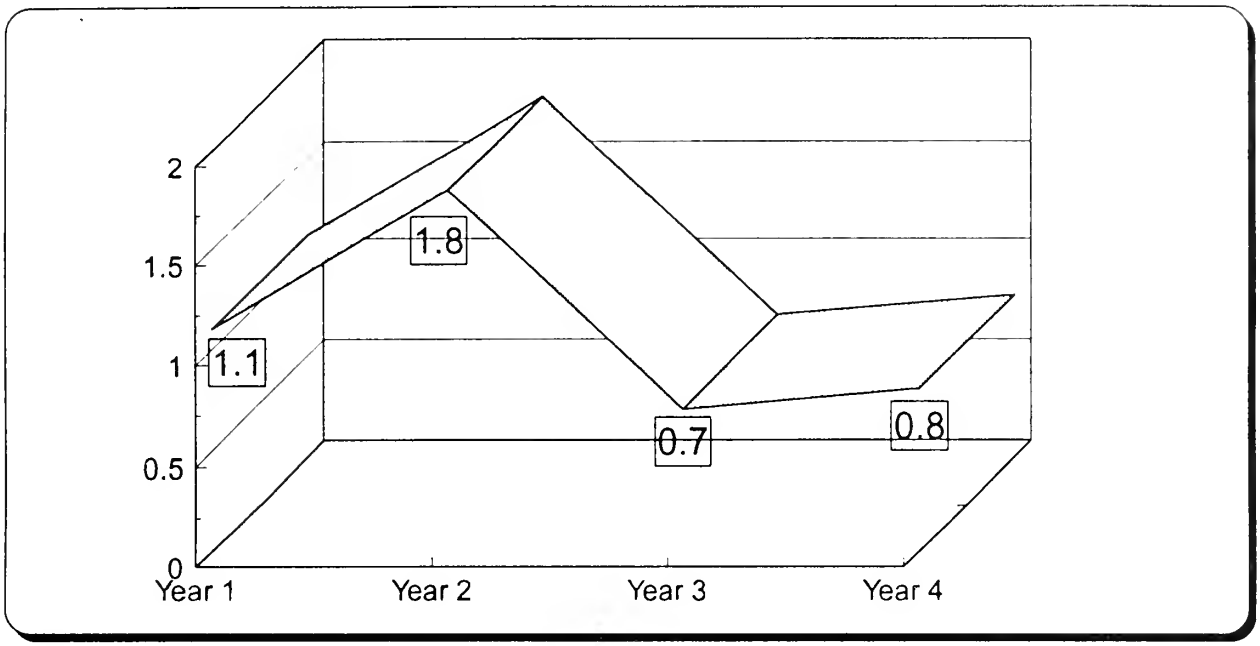
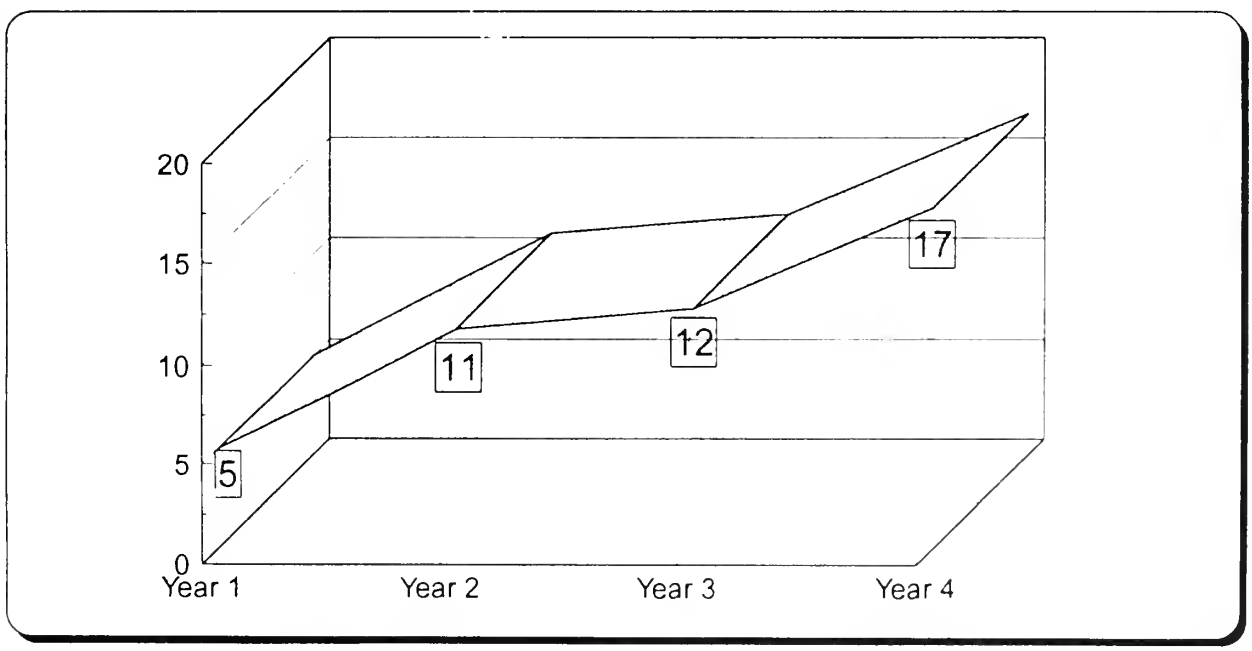


Figure 18

Number of Competitive Awards and Continuation Awards Received by Saint Paul's College, by Year of Capacity Building



It is important to note that two other needs, not articulated by SPC prior to the OFSP development, were addressed by the capacity building program. The first was the development of a more "business-like" approach to program management and accounting at the college. Administrators and faculty cite this as a significant benefit to the institution, which had traditionally operated in a more general mode of raising funds, running the institution, and not focusing on how those two activities could be done jointly. Developing its sponsored programs administration forced the college to give serious consideration to its procedures for managing grant-supported programs, especially, as institutional responsibilities, rather than individual faculty responsibilities. Similarly, the OFSP has helped to illustrate to faculty the direct connection between their professional activities and the financial viability of the college.

The second unanticipated benefit of the OFSP development was the establishment of a stronger and less adversarial relationship between SPC and the local governments of the region where the college is located in Lawrenceville, Virginia. Previously, the college had little direct interaction with local governments, other than in response to complaints about the typical problems of unruly behavior among some of the college students. The OFSP gave SPC a resource that was of immediate benefit to the region, particularly as it helped to secure funds for the renovation of roads and other infrastructure in the Lawrenceville area. The relationship is viewed by SPC as having considerable potential for a lasting and mutually beneficial partnership for meeting local needs and providing students and faculty with real-world learning experiences.

7. Relevant Needs Not Addressed by the Capacity Building Program

As stated above, the development of the OFSP and related administrative infrastructure has had little direct impact on the quality of SPC's programmatic infrastructure. The clear indirect benefit is that faculty and administrators at SPC are

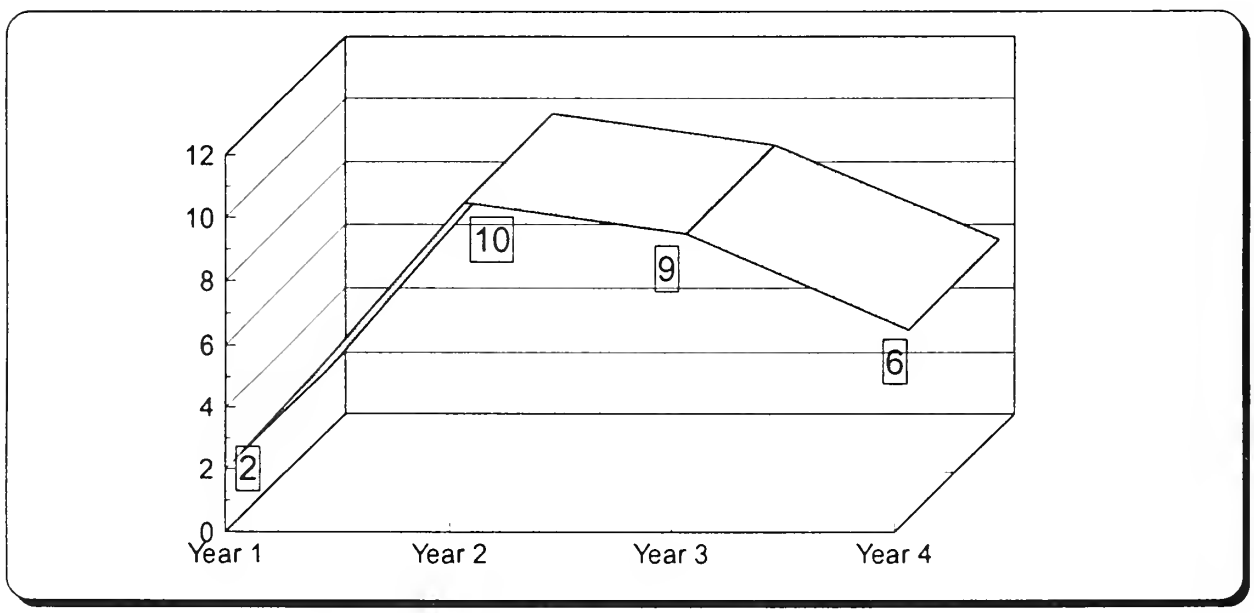
now are in a better position to pursue funding for equipment, facilities, and other programmatic capacity building.

Site visit interviews suggest that there is one other very significant issue that has not been adequately addressed by the OFSP: There are no tangible incentives for faculty to pursue external program funding. The reasons for this issue remaining unresolved relate to the politics of the institution. Reportedly, throughout the four years of capacity building, the former Vice President for Academic Affairs and numerous faculty have advocated the implementation of a system of bonuses, by which faculty can be directly rewarded for their pursuit of external funding. While such a position seems reasonable on its surface, it is seen by some administrators as inconsistent with the primary teaching mission of the college. The current administration has taken a firm stand against any policy directions that would treat researchers and teachers differently, specifically to avoid the establishment of a system that might appear to devalue teaching as a profession. The result is that there has been no concerted effort at SPC to designate bonuses for successful grant writers, or to create a formula by which researchers could reliably benefit from indirect cost recovery. It may be that the lack of such incentives underlies the finding that SPC, after having a major increase in the number of PIs on competitively funded projects from 2 in the first year of capacity building to 10 in the second year, had only 6 PIs on such projects in the fourth year. Figure 19 displays the number of PIs who received awards in each year of the capacity building program. The small numbers of faculty involved also make quantitative findings such as these somewhat unreliable as indicators of trends over time. It remains to be seen whether SPC will develop a system of accounting and compensation that will provide effective incentives for participation in sponsored programs without undermining the mission of the institution.

The only other apparent need that may require attention is all too common among institutions of higher education. Specifically, the Financial Affairs division of SPC was described by faculty and administrators as being consistently slow in

processing records of transactions at the college. As a result, PIs have had occasional difficulty drawing down money from their accounts. Part of the difficulty stems from the unfamiliarity of some faculty with the limitations of their funding, which often preclude the disbursement of funds for certain purposes. The OFSP has tried to address the faculty side of this issue by familiarizing PIs with the characteristics of their budgets and encouraging PIs to track their own expenditures carefully, ensuring that PIs will know what they can afford to do with their funds. It is not clear whether any action has been taken to make direct improvements to the functioning of the Financial Affairs division.

Figure 19
Number of PIs Receiving Competitive Awards and Continuation Awards at Saint Paul's College, by Year of Capacity Building



8. Summary of Outcomes Indicating Program Success

The foregoing discussion of the SPC history, OFSP development, and the degree of success achieved by the OFSP suggests that the capacity building effort was implemented in an appropriate manner, with the definite achievement of its immediate intent to create a formalized, centralized administrative infrastructure for sponsored

programs. Unfortunately, few indicators point to a successful impact of the office. The number of PIs has risen from 2 out of 39 faculty to 6 out of 42 faculty during the four-year program. Thus, there has been progress, but only small progress compared to the remaining potential capacity of SPC's human resources. Similarly, the number of awards each year more than tripled during the four years of the program, while the actual number of dollars awarded each year for competitive funding actually decreased by 20 percent. It is not clear whether the OFSP can establish a more distinctive record of success until the programmatic infrastructure of the college is updated and expanded. As a result of these factors, the ultimate degree of success of the PHS/OMH support to SPC has yet to be determined.

9. Summary of Extra-Program Factors Affecting Program Outcomes

The development of the OFSP at SPC has been thoroughly intertwined with events and circumstances that were not explicit components or considerations of the *HBCU Capacity Building Program*, but may have both helped and hindered its success. For example, the project director at SPC had the benefit of participating in the Extramural Associates (EA) program just prior to applying for PHS support for the OFSP. The EA program director for NIH helped to initiate the original OFSP Director's pursuit of the PHS funding, and the program served as a primary training ground to prepare that individual for service with the OFSP. Clearly, this was a positive influence on program success.

On the negative side, the administrative and programmatic circumstances of SPC required a complete overhaul in order to make the college competitive in its pursuit of external funding for programs. The college was not simply being held back from sponsored programs participation by a lack of administrative infrastructure. The limited programmatic infrastructure, in combination with institutional fidelity to its teaching mission, has created a situation in which the impact of the *HBCU Capacity Building Program* has been measurable, but incremental.

D. SAVANNAH STATE UNIVERSITY CASE HISTORY

1. Pre-Program History of Administrative Infrastructure for Sponsored Programs

Savannah State University (SSU) is an institution in transition, in ways that go far beyond the development of a sponsored programs office. In fact, when the institution, which was known as Savannah State College until January of 1996, applied for PHS support through the *HBCU Capacity Building Program* in 1992, it did so under the signature of an interim president. The unsettled position of the presidency was accompanied by instability in other administrative positions, as well, including the approaching retirement of the Dean of Science and Technology, who had initiated pursuit of the PHS funding. This instability, along with a persistent lack of resources for program development, appears to have laid a historical foundation for initial difficulty in launching the current Office of Research and Sponsored Programs (ORSP) at SSU.

The development of administrative infrastructure at SSU had its roots with the participation of the Dean of Science and Technology in the Extramural Associates program, sponsored by NIH, in the mid-1980s. As a direct follow-up to that program, she prepared a proposal to the administration of Savannah State College to develop an Office of Sponsored Research in 1986. The college administration tabled the proposal for lack of resources to staff and equip such an office. The availability of capacity building funds through PHS gave the college an opportunity to reshape the proposal and implement the desired development of the sponsored programs office. As stated in the original application, this office would fill an important need on a campus that had already developed significant research programs since the 1970s, partly through Minority Biomedical Research Support (MBRS) and Minority Access to Research Careers (MARC) grants. These experiences had given many researchers at the college an awareness of the administrative challenges of securing and managing awards in the absence of an administrative infrastructure for sponsored programs.

At the start of the *HBCU Capacity Building Program*, Savannah State College had already acquired significant institutional experience with sponsored programs administration, but only in a piecemeal, decentralized fashion. Faculty and administrators at the college had access to little systematic support for the identification of opportunities, other than through their own informal networks. Officially, the responsibility for opportunity identification was also distributed among the Office of Development, the Office of the President, and the offices of the Vice President for Academic Affairs, Deans, and Department Chairs. Researchers also had no source of support for proposal preparation, no reliable advocates for release time or matching funds, and no guidance in meeting the institutional or governmental requirements for proper and legal administration of externally funded projects. Thus, Savannah State College was, in many ways, an ideal example of an institution in need of a sponsored programs office.

2. Extent of Past Involvement in Sponsored Programs

As stated above, the move towards development of a sponsored programs office at Savannah State College was partly driven by the fact that externally sponsored research efforts had been conducted on campus since the 1970s. However, records indicate that all grants and contracts, from 1987 to 1991, never exceeded $2 million per year. In that same time period, external funding for *research* never exceeded $900,000, and had been declining steadily since 1988 to a level of almost $300,000 in 1991. While SSU is not a large institution, with only 2,800 students and approximately 140 faculty and professional staff, these figures reflect a low level of involvement with sponsored programs, with only about 5 percent of the faculty receiving grants or contracts. Overall, these figures suggest that the research development efforts at the Savannah State College were not succeeding prior to 1992, in the absence of an administrative infrastructure for sponsored programs.

During site visit interviews, conducted in February of 1997, SSU faculty and administrators helped to give a more complete picture of pre-1992 research efforts. Those interviews indicated that some of the facilities on campus, particularly in Biology, provided a fairly adequate programmatic infrastructure for certain projects, especially in marine and estuarine sciences. In many parts of the campus, however, buildings had been suffering from deferred maintenance and outdated facilities, creating a mounting series of crises which required immediate use of institutional funds. That situation persists at SSU in 1997, with students loudly and publicly protesting the decay of dormitories. In this environment, the administration has had to freeze expenditures on anything considered non-essential for meeting the basic instruction obligations to students, making it difficult for researchers to access funds for maintenance or updating of research equipment and facilities. One example of the results of such prioritization is that the institution currently lacks a federally approved animal house, making it impossible for faculty to conduct research that involves live animals. The existing animal facility has been deemed to be no longer adequate for the safe and humane treatment of animals. The combination of inadequate facilities with the lack of centralized administration of sponsored programs culminated with the inability of Savannah State College to renew its MARC and MBRS funding since the early 1990s.

The original application for PHS capacity building support, and the interviews with faculty and administrators, make it clear that the programmatic infrastructure at Savannah State College was in decline in 1992, significantly limiting the institution's participation in sponsored programs. The economic recession of the early 1990s, coupled with subsequent cuts in federal and state funding, created conditions in which the college was in ever greater need of external funding for its programs. In addition, as stated previously, the college administration was in a state of flux. Under such circumstances, the capacity building effort could have been a crucial step towards stabilization of the college, or it could have been a poorly timed endeavor that was destined for difficulty. The evidence from the four-year effort suggests that both conditions were true to some degree.

3. Strength of Programmatic Infrastructure for Conduct of Sponsored Programs

As described above, the history of decline in the programmatic infrastructure, especially for research, left Savannah State College with a limited capacity for the conduct of sponsored programs. The original program application does not further describe the status of laboratories, computer facilities, or other aspects of the infrastructure. It is important to note that one of the programmatic strengths of SSU is the fact that it has a School of Business Administration, with graduate programs leading to the M.B.A. degree. However, the proposed development of the sponsored programs office indicated an emphasis on the natural sciences and technology, rather than on business or other fields.

4. Initial HBCU Expectations for Use of PHS/OMH Support

As indicated in the original application for capacity building support, the personnel at Savannah State College had at least a basic understanding of the nature of the capacity building that was to be facilitated by PHS. This included indications that the college would use the support to designate and equip sponsored programs office facilities, assign personnel, and create administrative systems for conduct of the following types of activities:

1) Assessing faculty research activities and interests through questionnaires;

2) Identifying funding sources through maintenance of regular contact with funding agencies and through computerized information resources;

3) Informing faculty of opportunities and sponsored programs office services through a weekly newsletter, based on staff review of grant and contract opportunity announcements;

4) Making periodic visits to federal agencies and attending conferences as needed to explore available opportunities;

5) Typing proposals;

6) Conducting workshops to guide faculty in proposal preparation and project administration;

7) Development of an Internal Review Board (IRB) that would include committees for review of risks to human and animal subjects in proposed research projects;

8) Working with faculty, administrators, and an on-campus advisory committee to develop institutional policies that would support, promote, and give appropriate structure to the processes of obtaining and managing external funds for sponsored programs; and

9) Becoming active in professional organizations of research administrators, and networking with other institutions, to become more knowledgeable and competitive in obtaining sponsored program awards.

The milestones proposed for each year of capacity building suggest that the college had very concrete ideas regarding specific agencies that were to be marketed each year, as well as specific policy areas that were to be addressed within the institution regarding release time, indirect cost sharing, and other incentives for faculty participation. The application also indicates that the Proposed "Office of Sponsored Programs" would establish a review committee to ensure the quality of proposals before their submission.

The application is somewhat vague, however, about some of the specific elements of the administrative infrastructure that might be put in place. For example, there is no specific reference to the on-line services that would be most beneficial to the office in identifying opportunities, nor is there any description of specific post-award functions for the office. Other areas not explicitly discussed include the following:

- Provision of assistance to faculty in project budget preparation;
- Assisting with program auditing;
- Tracking proposal development;
- Tracking the status of funded projects; and
- Assisting with the preparation of required project reports.

Such omissions suggest that the initial expectations of Savannah State College may have been limited by the fact that there was not an experienced sponsored programs administrator involved with the development of the initial application for PHS support. The Dean of the School of Science and Technology, may have made some contributions on the basis of her Extramural Associates training in sponsored programs administration, but that training had a heavy emphasis on the identification of funding opportunities in the biomedical sciences. It should be noted that, the proposed Director of Sponsored Programs was an experienced professor and researcher who had directed specific externally funded programs, but who had not worked in the broader capacity of a sponsored programs administrator in any institution. The plan to rely on his individual grant administration experience may have represented an inappropriate expectation regarding the challenges of running an effective sponsored programs office, particularly given the fact that the only other proposed professional staff in the office would be an administrative assistant.

5. Interventions Conducted Under the Capacity Building Program

The history of actual program implementation at SSU has two distinct phases. In the first phase, which includes most of the first three years of the cooperative agreement, limited progress was made on the proposed interventions for improving administrative infrastructure. In the second phase, with a refurbished, restaffed, and renamed Office of Research and Sponsored Programs (ORSP), program implementation appears to have been largely successful. This history is presented in two parts below, pertaining to the initial organization of the office, and the re-organization of the ORSP as it was operated during year 4 of the cooperative agreement.

a. The Early Years of the Office of Sponsored Programs

The part of the ORSP history that may be most educational, regarding the difficulties of the first three years of capacity building, is also the murkiest part of the history. During that time the *Office of Sponsored Programs* (OSP), as it was originally labeled, was physically established, but it is not clear to what extent the office actually performed its intended functions. The program records indicate that progress reports for the first and second years were inaccurate in their portrayal of advances in the capacity building effort, making it difficult to obtain a clear understanding of the extent to which office functions were implemented. Site visit reports from the PHS Program Officer and the federally contracted Technical Assistance (TA) provider suggest that extremely little progress was made in establishing the basic functions of the sponsored programs office during the first two years of PHS support. Evidently, the PHS monitoring revealed the lack of progress during the first year, but this did not immediately result in a heightened level of scrutiny by PHS. It is particularly noteworthy that a full year elapsed between the federal site visit in the Spring of 1993 and the subsequent federal site visit in the Spring of 1994, at which time the lack of progress was found to have been largely unchanged. Only then, in June of 1994, do the records show significant attention having been focused on the institution, eventually leading to personnel changes that were made by the new President of the institution in 1995.

The nature of the difficulty faced by the Director of the office is not entirely clear in the site visit reports or in other documentation maintained by PHS and OMH regarding SSU. These documents, when considered along with the discussions during the 1997 evaluation site visit, suggest that the following problems hampered progress in the original OSP:

- Insufficient training of sponsored programs office staff in key elements of sponsored programs administration, such as the use of computerized search software for identifying funding opportunities;

- Lack of a customer service orientation on the part of office staff, who were reportedly disinclined to go out of their way to ensure timely processing of proposals and related paperwork;

- Disuse of materials, such as the Sponsored Programs Information Network (SPIN) software, which had been purchased but not installed prior to 1995;

- Disuse of project file space, intended for maintaining centralized records of proposals and related materials;

- Instability among top administrative positions, leading to difficulties in getting interim administrators to commit the institution or its divisions to specific capability statements, cost sharing policies, release time policies, or other priorities promoted by the sponsored programs office; and

- A perception among faculty that the early Office of Sponsored Programs was not offering reliable services, other than opportunity identification and some advocacy for institutional policies favorable to the conduct of externally funded research, fostering a continued tendency for faculty to work independently, if at all, on obtaining and administering external funds for research and other activities.

There are also reports that the early staff members had been assigned to the office in an effort to re-employ individuals who had been released from other offices on campus, leading to an array of problems in the office. The former staff persons were unavailable during the evaluation site visit, making it impossible to get their version of the story. Reportedly, however, these employees had challenged the legitimacy of their previous firing, resulting in the college being required to find administrative positions at a professional level comparable to their prior positions. Consequently, the Office of Sponsored Programs was directed to hire those individuals. As an apparent result of their adversarial relationship with the college, the assigned staff persons are said to have been somewhat arrogant and disenchanted with their sponsored programs duties, sometimes resisting direct requests from the Director of Sponsored Programs and other persons on campus. Site visit reports also suggest that some of the difficulty may have come from inadequate training on the nature of assigned duties, which would presumably open the door to "not my job" types of disputes.

Some interviewees also observed that personnel difficulties may have been related to the limited management experience of the Director, suggesting that an office of sponsored programs might best be run by a professional sponsored programs administrator, rather than by a professor or researcher. While such observations amount to little more than personal opinions, it is clear that there was no such professional administrator in the Director's position or on the staff of the early Office of Sponsored Programs at Savannah State College. Thus, the office had to rely almost entirely on the availability of outside technical assistance for training and guidance. The records show that the federally contracted TA providers made numerous appropriate efforts to provide such support to the office on site, by telephone, and by mail. Their guidance, however, was apparently not heeded in many instances. Interviewees also state that the Office of Sponsored Programs staff visited Georgia Southern University in order to observe the structure and function of that institution's sponsored programs office. As one TA provider has suggested, it may be necessary for TA to be much more intensive than was possible within the structure of the *HBCU Capacity Building Program* resources, particularly through longer periods of structured training and on-site assistance.

Given the difficult circumstances of the Office of Sponsored Programs prior to 1995, it is worth noting that Savannah State College did succeed in implementing the following interventions, most of them by the end of the first year:

- Designation of office space for the Office of Sponsored Programs, including the Director's office, the Assistant Director's office, a reception area that includes a workstation for the Administrative Secretary, a small resource library and file area within a broad corridor that also includes ample space and equipment for the physical production of documents;
- Purchasing of computer equipment for use in the office;
- Assignment of a full-time Director, as well as individuals who would serve as Grants Specialist and Administrative Secretary;

- Assignment of 5 part-time student assistants to work in the office;
- Designation of reporting arrangements for the office, including positioning of the office to report directly to the President;
- Production of at least draft materials for sponsored programs administration, including:
  - A policy handbook describing procedures for appropriately obtaining and managing contracts and grants,
  - Production and/or acquisition of instructional materials to guide faculty in proposal writing and in budget preparation,
  - Proposal routing and approval forms, and
  - Designation of pre-award and post-award duties of each member of the sponsored programs office staff;
- Production of a simple newsletter, highlighting certain funding opportunities and their proposal submission deadlines;
- Conduct of a review of problems cited in agency reviews of prior proposal submissions;
- Conduct of at least one proposal writing workshop each year, as well as participation in annual sessions of the institution's "Faculty Institute";
- Conduct of a survey of faculty capabilities;
- Conduct of proposal reviews, processing, and transmittal; and
- Establishment of contacts with sponsored programs administrators in at least six other colleges and universities for the purpose of networking.

In addition, during the second year, the office succeeded in securing contract funds from agencies of three federal departments and at least two non-federal sources, expanding the resource base of the college. The office also instituted proposal processing procedures that ensured inclusion of a letter of support from the President. While these early accomplishments appear to be substantial, the result was far from the goals of establishing a fully functional, comprehensive office of sponsored programs. Indeed, some of the reported accomplishments, such as installation of SPIN and other software packages, were evidently misrepresented in the annual reports.

The extent of misrepresentation, uncovered during the federal site visit in May of 1994, led to restrictions of grant funds to the institution. The restrictions included the requirement of detailed quarterly reporting with regard to very specific tasks and time frames, in order for the college to obtain funds in an incremental manner.

b. Establishment and Operation of the ORSP

By March of 1995, the President of Savannah State College had decided that the Office of Sponsored Programs might function more effectively if it were completely reorganized, with a business-oriented entrepreneur in charge, rather than a seasoned researcher. Thus, a faculty member, who had been one of only two Business Department faculty members officially engaged in grants and contracts, was asked to serve as the new Director of the office. His business perspective resulted in a series of immediate changes designed to focus the office more effectively on customer service, including the following six actions:

1) Installation of carpeting on the concrete floors, repainting the cinder-block walls, and obtaining furniture selected to give the office a more professional atmosphere;

2) Changing the name of the office from *Office of Sponsored Programs* to *Office of Research and Sponsored Programs* (ORSP) in order to emphasize the role of the office in facilitating research on campus;

3) Documenting performance deficiencies of office staff relating to more than simple training problems, resulting in their dismissal;

4) Recruitment of a 5-year veteran of the pre-award aspects of sponsored programs administration at Georgia Southern University to serve as Assistant Director of the ORSP;

5) Prioritization of the establishment of functional systems in the office, including the updating of computer equipment, the loading of previously unused sponsored programs administration software, and the structuring of physical file cabinets for proposal copies and other records to track the progress of the office;

6) Exploration of entrepreneurial mechanisms for obtaining funding for the ORSP, in anticipation of the conclusion of the PHS/OMH cooperative agreement; and

7) Involvement of the ORSP in community service to build stronger ties between SSU and the surrounding community, such as presenting proposal writing workshops to representatives of local service organizations, and establishing a Foundation Center Cooperating Collection reference library at SSU to give organizations in the region greater access to information about the availability of foundation funds.

Item 5 above, relating to the creation of project files, has led to the development of a thorough computerized data base that includes the following fields:

- Project Director;
- School and Department;
- Project Title;
- Funding Agency;
- Classification of the project as Instructional, Research, or Public Service;
- Project Period;
- Budget Period;
- Current Budget;
- Amount of the current budget that is for *Direct Expenses*; and
- Amount of the current budget that should be channeled to particular entities under the formula for distribution of *Indirect Expense* recovery.

Item 6 on the list of the new Director's changes is significant in that it resulted in creation of the Survey Research Center (SRC), as a division of the ORSP, in July of 1996, to provide revenue directly to the ORSP. Through negotiations with OMH, the new Director arranged for the use of $15,000 from the cooperative agreement, along with $25,000 from the SSU's indirect expense recovery, to convert the ORSP space from its high-ceiling and single-floor configuration, to include a second-floor loft, increasing the available space of the office by about 50 percent. The upper level has

been equipped with 6 computer workstations, with hardware and equipment for conduct of surveys through a Computer Assisted Telephone Interviewing (CATI) system. The new director, it should be noted, was able to promote his Administrative Assistant to the role of Assistant Director of the SRC, based on her demonstrated administrative skills and her training in the field of Marketing.

The development of the SRC represented a shift in priorities for the ORSP, which clearly has both positive and negative consequences. The positive outcome is that the SRC has had a steady flow of contracts, sometimes as a subcontractor to projects already funded at SSU, and at other times as a resource that is utilized by local government and private agencies. In this way, the SRC has been a clear success in providing funding that directly supports the ORSP and its staff. This support is, however, primarily aimed at the conduct of specific projects, as opposed to the operation of the ORSP in serving the campus as a whole.

The acknowledged negative aspect of the attention given to SRC development is that it has taken ORSP attention away from its aim of establishing the full array of desired post-award functions. By year 4, the ORSP was advising faculty regarding the reporting requirements of their funded projects, and provided some assistance to solve post-award problems on a case-by-case basis. However, there was not a system for regular ORSP monitoring of project status and reports, other than the clearance of requested purchases. It is important to note that the low priority given to the full establishment of post-award functions is said to be partly due to the limited access that the ORSP is granted to budget information, based on the administrative structure that is used throughout the University System of Georgia.

By the end of the four-year capacity building effort at SSU, and the investment of a total of $938,538 from PHS and OMH, the ORSP had finally been established with its current array of services, emphasizing pre-award functions, and supporting itself through the SRC. Clearly, there is still room for further development of the office. It

remains to be seen whether SSU or the State of Georgia will act to ensure the continued success of the office. The following issues remain as potential difficulties:

- The institution has undergone another change in its presidency in 1997, although this instability is to be alleviated by the assurance of a five-year term for the new president, who was immediately assigned by the University System of Georgia, rather than sought through a long search process;

- While Business faculty are generally known to be involved in consulting efforts, none of them has been willing to engage in such projects through the university in recent years, due to the perceived difficulties of project administration through SSU; and

- The programmatic infrastructure of SSU is still lacking many of the advanced technologies and equipment needed to engage in competitive research activities.

In addition, while the ORSP has succeeded in finalizing and publishing policies related to the proper administration of sponsored programs, these struggles of the office are not yet concluded. As mentioned earlier, the institution has had ongoing difficulties in addressing the crises that arise from deferred maintenance of the physical plant. With regard to sponsored programs, this crisis mode has resulted in the suspension of any distribution of funds collected for indirect cost recovery, despite the official establishment of a formula for indirect cost sharing. This formula was designed to channel 40 percent of indirect expense money to the support of the SRC, 15 percent to the academic department in which each funded project occurs, and 5 percent to the school in which each funded project occurs. Interviewees indicate that this sharing of revenue has yet to be put into practice.

One additional wrinkle exists within the administrative infrastructure of SSU. Officially, another faculty member has held the title of Associate Director of the ORSP since 1994. This position, which is intended to focus on the acquisition of funding for the biomedical sciences, was created partly as a result of the disarray that existed in

the first two years of the capacity building effort. The faculty member had participated in the Extramural Associates program at NIH from January to May of 1994, culminating with his proposal to use his post-training funds for many functions that would normally be associated with the sponsored programs office, such as arranging seed money for new projects, conducting grant writing workshops, and providing other faculty development opportunities to support research. This proposal was accepted by Savannah State College and by NIH, creating a situation in which the institution was obligated to support the faculty member's efforts while also associating them, at least in name, with the ORSP. Interviewees report that, in reality, he has never been given release time to conduct his Associate Director activities in a meaningful way, other than in administering the seed grants and helping to write broad program proposals intended to enhance SSU's programmatic infrastructure for biomedical research. Those proposals have not been funded. At the conclusion of the *HBCU Capacity Building Program*, this issue had not been resolved, leaving an apparent expectation among all parties that the current staffing of the ORSP would be sustained as is, with the Associate Director having little time for his role and no office within the ORSP facility.

Despite the troubled history of the ORSP at SSU, faculty describe it as a distinct improvement over the pre-1992 situation in which no administrative support was available for obtaining and managing sponsored programs. Even the early Office of Sponsored Programs was a welcome addition, although it offered very limited assistance. Satisfaction surveys administered by the ORSP indicate that faculty have been quite pleased with the more recent improvements of the office and the quality of its services. As discussed below, even the slow and difficult development of the office seems to have shown signs of positive impacts on the university, suggesting that the capacity building interventions have already begun to take hold at SSU.

6. Needs Addressed by the Capacity Building Program

The needs for capacity building at SSU have been both administrative and programmatic. Prior to the PHS/OMH program, faculty had no systematic support of their efforts to obtain external funding for research programs, equipment acquisitions, or professional development. The physical infrastructure of the campus still constrains the ability of faculty to conduct cutting-edge research. However, the new ORSP has clearly had an impact on many of the faculty, by helping them to find funding sources, assisting in the production of competitive proposals, and advocating appropriate institutional policies that support the conduct of their projects. The *HBCU Capacity Building Program* made these advancements possible by providing the following much needed aids:

- Seed money to support the acquisition of appropriate office equipment, computer hardware and software, and staff for a fledgling sponsored programs office;
- Monitoring and guidance to the Office of Sponsored Programs, the ORSP, and top administrators of the institution, to encourage a steady effort towards progress in an unstable institutional environment; and
- Technical assistance and training, needed by the office staff in order for them to structure their activities and carry them out in a productive way.

It is evident that the interventions imposed under the PHS/OMH program were only partially successful in meeting the targeted needs, especially during the first three years of capacity building. In the end however, the available data indicate that many of the needs are being met. The ORSP is a stable feature within the administration of SSU, providing appropriate assistance to the faculty, most of whom have utilized the ORSP's satisfaction survey to express their gratitude for services received. In addition, Title III funding from the U.S. Department of Education (US ED) has supported the recent investment of $250,000 in new science equipment, in 1995, along with the development of a fiber-optic backbone for computer networking on campus. These

improvements to the programmatic infrastructure may pave the way for further success in sponsored programs. The combined impact of such improvements might best be gauged, however, in a few years, as they become integrated into the activities and reputation of the university.

Although the available quantitative data from SSU have questionable reliability for the first three years of capacity building, they do appear to show consistent positive impacts of the new administrative infrastructure for sponsored programs. For example, the number of faculty serving as externally funded Principle Investigators (PIs) appears to have increased from 8 during the first year to 14 during the fourth year of the program. The number of PIs for each of the four years of capacity building is displayed in Figure 20. The number of contract and grant awards, including renewals and continuations but excluding the formula-based awards of Title III support from US ED, has increased from 5 awards during the first year to 22 awards during the fourth year. This trend is illustrated in Figure 21. The dollar amount awarded each year increased from about $1.3 million in the first year to a high of nearly $2.1 million during the third year, falling slightly to about $2.0 million awarded during the fourth year, as shown in Figure 22.

Figure 20

Number of PIs Receiving Competitive Awards and Continuation Awards at Savannah State University, by Year of Capacity Building

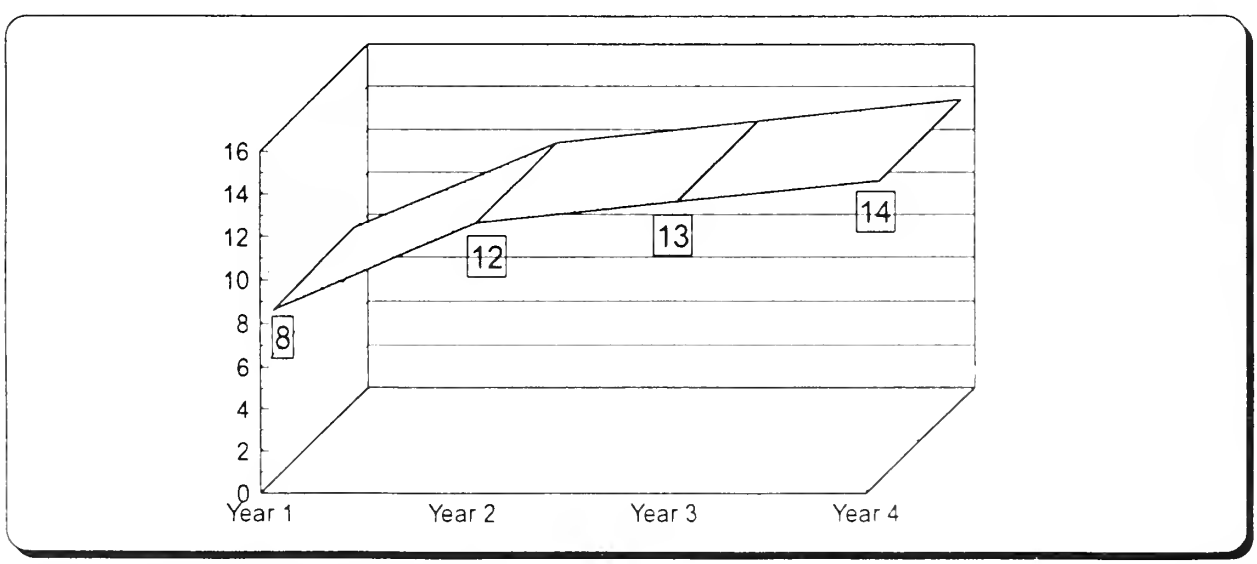


Figure 21

Number of Competitive Competitive Awards and Continuation Awards Received by Savannah State University, by Year of Capacity Building

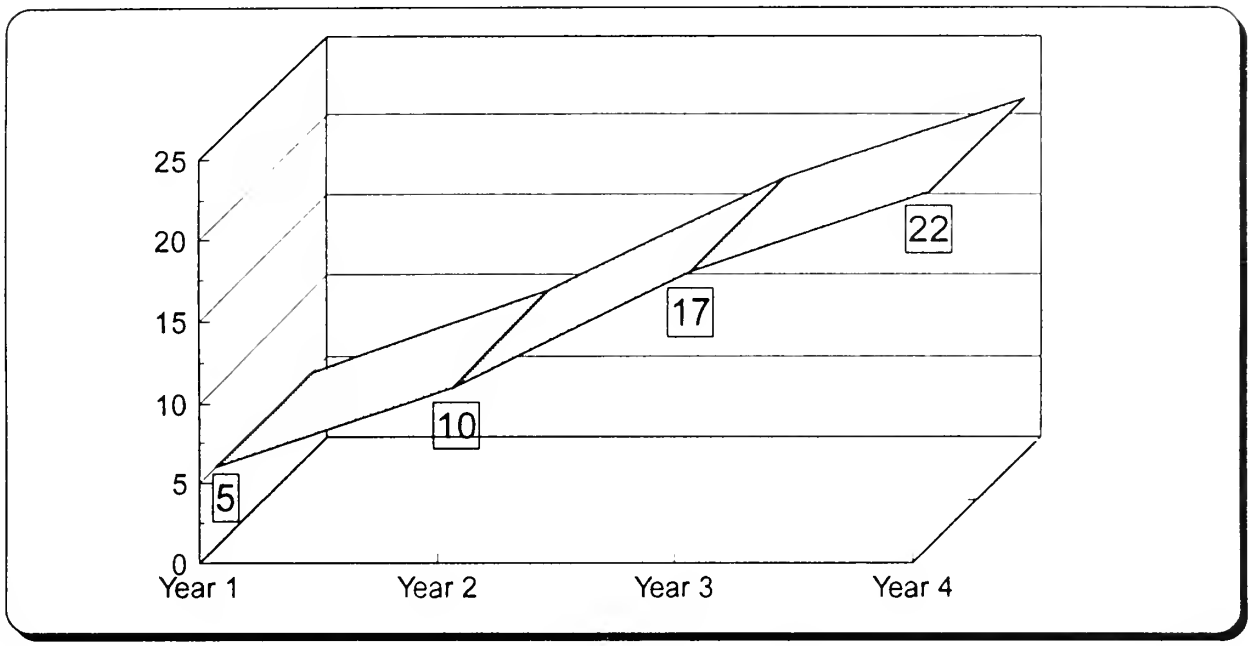
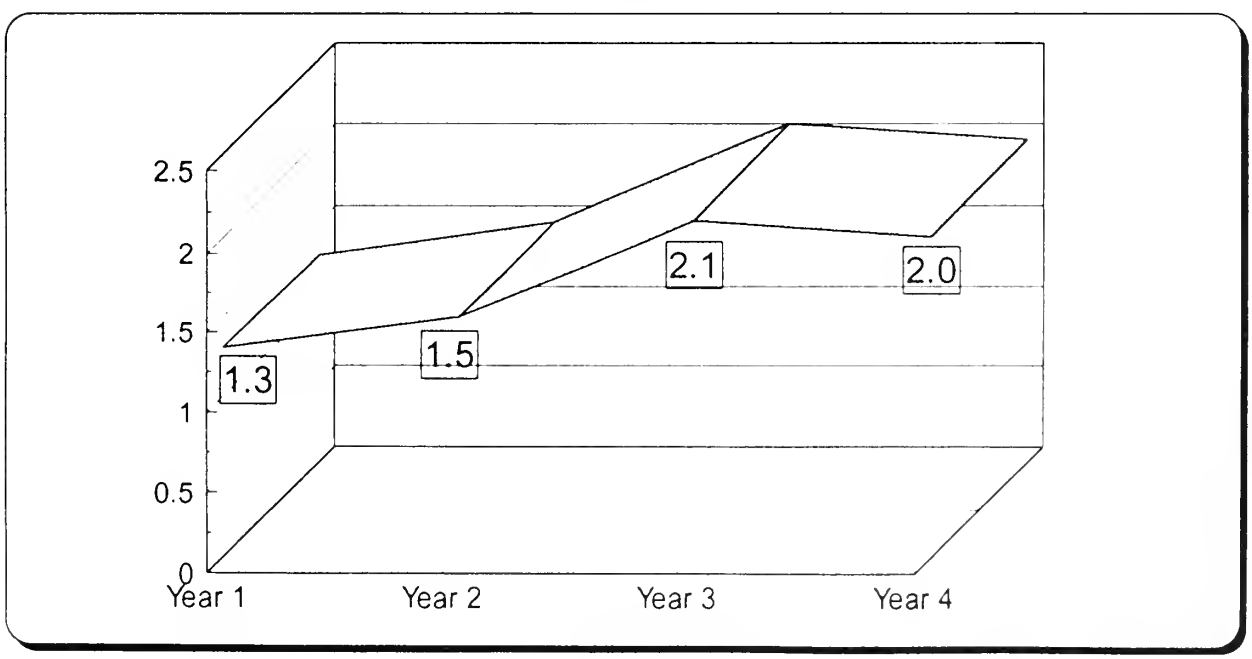


Figure 22

Dollar Amount, in Millions, of Competitive Competitive Awards and Continuation Awards Received by Savannah State University, by Year of Capacity Building



All of the available quantitative indicators suggest that SSU has already begun to reap some rewards of its new sponsored programs administration. As one interviewee stated during the evaluation site visit, the increased success has already won some "converts" on a faculty that has been traditionally and predominantly focused on teaching, rather than on research or other sponsored programs. Clearly, there is room for more conversions, given the current level of only 14 PIs on a faculty of 140 persons. The other task that remains is for the ORSP to re-establish credibility with funding agencies, most notably by preparing what are hoped to be competitive proposals for broadly targeted programs such as MBRS and MARC. Faculty report that they are increasingly confident that the administrative improvements at SSU will result in the restoration of these significant program funds.

7. Relevant Needs Not Addressed by the Capacity Building Program

The two major needs of SSU that continued to exist at the end of year 4 were (1) the need for a stronger programmatic infrastructure and (2) the need for consistency among top administrators. The *HBCU Capacity Building Program* was not designed or intended to address either of these two issues directly. Indirectly, it is somewhat reasonable to expect that an office of sponsored programs could help the institution to obtain support for the programmatic infrastructure. However, it is not as realistic to expect a new administrative infrastructure for sponsored programs to have a positive impact on the stability of an institution that is seeking new top leadership. There is little indication in the program files that PHS gave specific consideration to the difficulties that might be associated with making a significant change to the administrative structure of SSU in 1992, at a time when the institution had only an Interim President. The subsequent experience of PHS and OMH suggests that such instability at the top of the institution, which ultimately extended to Vice President and Dean levels, should be settled before investing significant resources in attempts to change the structure and policies of the institution.

The ORSP, as it was finally structured, clearly meets many of the needs of SSU, and has begun to serve the surrounding community, as well. Of the office functions that PHS originally intended to establish within the office of sponsored programs, the ORSP, at the time of the site visit in February of 1997, still had not succeeded in establishing the following:

- Regular auditing of programs through the ORSP;
- Systematic tracking of funded projects;
- Assisting with the preparation of required reports for funded projects; and
- Distribution of revenue based on an established formula for indirect expense recovery.

As stated previously, the last issue of indirect expense recovery is an area that the ORSP has tried to address, only to meet resistance from other university administrators who insist on channeling all such discretionary funds to address "crises" on campus. It remains to be seen how the new President of SSU will prioritize such issues.

8. Summary of Outcomes Indicating Program Success

In many ways, despite the difficulties that arose in setting up the ORSP at SSU, the *HBCU Capacity Building Program* appears to have been a success. The increases in faculty participation, the number and dollar amount of awards received each year, and the ability of the ORSP to survive since the end of PHS/OMH support suggest that the impact of the program has been modest, but distinctly positive. The following is a list of the generally positive outcomes of the capacity building at SSU:

1) SSU now has a sponsored programs office, for which there had been no comparable entity prior to 1992;

2) The ORSP provides comprehensive pre-award services to help faculty in locating and obtaining external funding for programs;

3) The ORSP processes PI requests for purchases related to project implementation, engages in case-by-case troubleshooting, and provides informal assistance related to post-award administration;

4) SSU has established clear indirect expense rates, policies for the protection of human and animal subjects, and other systematic policies and procedures that ensure the proper conduct of research by the university;

5) SSU has increased its level of participation in externally funded programs, including the number of faculty involved, the number of funded projects each year, and the variety of funding sources; and

6) Through the SRC and assistance to the surrounding community, the ORSP has developed a positive image that helps to ensure the office's future and strengthens the image of the university as a whole.

9. Summary of Extra-Program Factors Affecting Program Outcomes

Much of the difficulty faced by the capacity building effort at SSU appears to relate to conditions that were external to the program. Most notably, the lack of a stable, continuing group of incumbents in the top ranks of the institution appears to have limited the impact of the PHS/OMH intervention. During the four-year program, this included one year with an Interim President and three years with a President whose tenure was complicated by student protests and the departure of many high level administrators, leading to his departure from the university shortly after the end of year four.

Underlying the administrative instability, however, is the fact that SSU has reportedly suffered from a lack of state support for maintaining and updating facilities and equipment. The state funding is based on a formula that considers the number of students matriculating at the campus, without regard for the fact that SSU serves a disproportionately high number of low-income students with little tuition money and an array of special needs.

It is also noteworthy that the declaration, in 1996, that all four-year institutions in the University System of Georgia were to be officially designated as "Universities" carried with it the expectation of involvement with research and graduate training, but no extra funds were budgeted by the state for these purposes. Thus, SSU has acquired greater responsibilities than it already had, without the means for meeting its existing responsibilities.

Such circumstances at SSU have the paradoxical effect of creating the need for an office like the ORSP, while also making it very difficult for the institution to invest appropriate resources to ensure the success of such an office. It is evident that the four-year effort by PHS and OMH helped to break the inertia that had previously prevented the creation of such an office. What remains to be seen is whether the impact of the *HBCU Capacity Building Program* will endure or wither under an entirely new university administration that has not had the benefit of periodic contact with the federal Program Officer and federally contracted TA providers. Such issues will make it worthwhile to revisit the university after several years have passed, to observe the financial stability of SSU, the status of the ORSP, and the extent of the university's involvement with the sponsored programs of DHHS and other public and private agencies.

E. UNIVERSITY OF MARYLAND EASTERN SHORE CASE HISTORY

1. Pre-Program History of Administrative Infrastructure for Sponsored Programs

The University of Maryland Eastern Shore (UMES) is a unique institution in the state of Maryland. The institution is one of only 4 HBCUs in Maryland, and one of only 2 HBCUs in the University of Maryland System (UMS), which includes a total of 13 institutions. As an 1890 Land Grant institution, UMES has a long-standing research tradition, largely in areas related to agriculture. Another indication of the institution's unique history is the fact that UMES won a lawsuit, in 1990, documenting a pattern of underfunding of the institution by the state. The state responded to this courtroom defeat by immediately investing money to refurbish laboratories and other facilities on the campus, giving UMES a much stronger programmatic infrastructure. In addition, in 1992, the state's Board of Regents declared that UMES would be recognized and promoted as the only doctoral degree-granting institution on the Eastern Shore, that portion of Maryland between the Chesapeake Bay and the Atlantic Ocean. While this declaration did not come with any promise of additional funds, it did unequivocally establish a priority of developing and enhancing research programs at UMES. Thus, the recent institutional history, leading up to UMES participation in the PHS *HBCU Capacity Building Program* in 1992, appears to have prepared the institution for the expansion of competitive research activities, if the institution could acquire additional funds for such activities.

While UMES was clearly moving in a direction that would allow the institution to benefit from a greater participation in externally sponsored programs, the university also had to overcome some negative aspects of its research history. As numerous faculty readily admit, UMES had a reputation, prior to 1992, of inefficient management of its externally funded projects. For example, many faculty did not have a proper understanding of indirect cost rates and how they should be addressed in project

budgets. The institution's required certifications and assurances were out of date, and faculty were often unaware of issues related to compliance with Federal regulations. Other reported problems included:

- Insufficient release time;
- Overcompensation of individuals who received payment from project accounts after the end of project funding periods;
- Late reports; and
- Non-delivery of required project products or reports.

These circumstances seriously undermined the competitiveness and responsiveness of UMES proposals, and even resulted in the loss of funding from key programs, such as the NIH Minority Biomedical Research Support (MBRS) program prior to 1988. The recollections of faculty members suggest that most of these difficulties sprang from the lack of a centralized structure for monitoring, coordinating, and guiding faculty in their pursuit and management of external funding. In short, all of these weaknesses, in combination with the recently enhanced programmatic infrastructure, appear to have made UMES a prime candidate for the development of its sponsored programs administration.

2. Extent of Past Involvement in Sponsored Programs

Prior to the PHS/OMH program, UMES had supported a variety of programs through external funding. According to the "Semi-Annual Activity Report" submitted by UMES to the state of Maryland in July of 1992, the university had funds from eight different federal departments and the National Science Foundation (NSF) in the 12-month period from July of 1990 to June of 1991. The university had increased its Federal funding sources to include 12 federal departments and the NSF in the 12-month period from July of 1991 to June of 1992, more than doubling the dollar

amount of its federal support. However, much of the increased funding was due to the efforts of a small number of faculty, and due to the receipt of formula-based funds targeted to HBCUs by the U.S. Department of Agriculture (USDA) and the U.S. Department of Education (US ED). Aside from the formula-based funding, records indicate that only 5 persons, out of approximately 265 faculty and research associates, were serving as externally funded principal investigators in the reporting year from July of 1991 to June of 1992. Thus, at the start of the *HBCU Capacity Building Program* in 1992, there was little indication that UMES had taken any substantive steps toward institutionalizing a competitive approach to the acquisition of more mainstream federal funds. One prodigious step that was taken, in 1991, was the hiring of a former staff person from the National Institute on Drug Abuse (NIDA) to share her federal program expertise by assisting faculty with the writing of more competitive proposals, and to assist with negotiation and oversight of grants and contracts. As the only staff person specifically assigned to assist with the acquisition and monitoring of sponsored programs, she played a primary role in pursuing PHS support for UMES to develop a sponsored programs office, of which she continues to be the Director.

It is notable that a similar step had been attempted in 1989, when UMES hired a former employee of the National Aeronautics and Space Administration (NASA) to be a central administrator of sponsored programs. That experience turned out much differently, however, with virtually no funds available for development of the physical resources of an office of sponsored programs, and very little establishment of formalized procedures for sponsored programs administration. That early effort was abandoned after less than two years.

3. Strength of Programmatic Infrastructure for Conduct of Sponsored Programs

There are at least three aspects of the programmatic infrastructure that have been cited by administrators and faculty as significant. First, as a result of investments

made by the state of Maryland since 1990, the Carver Science Center provides newly refurbished facilities for both classroom and laboratory activities. This center is particularly beneficial to researchers because of the fact that it is well-equipped with a network of both mainframe and micro-computers, which are used for collection, storage, management, analysis, and reporting of research data. The computers give researchers institutional access to software for word-processing, graphics production, database management, and statistical analysis.

The second major enhancement to the programmatic capabilities of UMES is the new on-campus conference center. This building includes meeting rooms, banquet facilities, and a small number of guest rooms, making it a marketable venue for training students in the hospitality professions, as well as for hosting a variety of meetings and events.

The third notable new feature is the state-of-the-art flight simulation and air traffic control simulation laboratory in the Airway Science Department. This unique facility was developed through a generous donation from the president of USAirways.

These new facilities, in combination with the presence of a modern academic library, as well as other laboratories and research facilities associated with agricultural research programs, comprise a substantive infrastructure for the support of a wide variety of externally sponsored programs in the sciences, social sciences, education, and various technical and professional fields. These conditions suggest that the institution is currently positioned well to compete for externally sponsored programs.

4. Initial HBCU Expectations for Use of PHS/OMH Support

According to the original grant application submitted by UMES to PHS, the university clearly understood the agency intent of the program and, accordingly, expected that the capacity building funds would be used to develop a centralized

administration of sponsored programs with a specific set of functions. The proposal indicates a clear understanding that the university's competitiveness depends only partly on programmatic strengths. The following administrative functions are enumerated as necessary for support of programs:

1) Identifying funding sources;

2) Editing technical documents;

3) Justifying budgets and arranging for facilities on and off campus;

4) Conducting Internal Review Board (IRB) reviews;

5) Project monitoring and administration; and

6) Consulting on such items as research designs, selection of data collection techniques, sampling frames, analysis schemes, etc.

The proposal also cites the following specific issues as indicative of the needs of UMES for a more functional administrative infrastructure to support sponsored research:

- Off-campus IRB reviews had been conducted through the University of Maryland at Baltimore, except for animal welfare reviews, leading to occasional delays and inter-institutional misunderstandings in many review processes;

- No on-campus access to on-line resources for efficiently finding announcements of funding opportunities;

- No funds devoted to out-of-state travel for project development;

- Limited pre-award activities or support services;

- Limited clerical and editorial assistance;

- No centralization of administrative services for support of sponsored programs; and

- No university-wide system for monitoring grants and contracts.

Thus, UMES indicated an expectation that the PHS/OMH support would be used to address these weaknesses. Their intent was to meet the needs of the university by establishing the OSP with at least the following characteristics:

- Three professional staff persons to provide the needed support services and administrative oversight for obtaining and monitoring grants and contracts;
- A resource library to be available to faculty for facilitating the identification of funding opportunities and for proposal development;
- Consultants, if needed, to assist with preparation and review of specialized research requests; and
- A series of workshops to train faculty in issues related to proposal development and project management.

The university also proposed a set of "objectives" and "milestones" that, together, define an OSP that addresses all of the desired elements identified by PHS in its program announcement, with the following exceptions:

- *Audit activities* were not specifically mentioned, presumably because audits were already an established routine within the UMS, along with the establishment of indirect cost rates for UMES and all other UMS campuses;
- *Follow-up on applications* was not specifically mentioned, although this appears to have been functionally subsumed, on an ad hoc basis, under the consultation function by which the OSP would assist PIs in project development and project monitoring; and
- *Assistance to PIs in obtaining space, release time and other resources* is not specifically cited, but appears to have been functionally subsumed, on a per-request basis, under the consultation function by which the OSP would assist PIs in project development and project monitoring.

The proposal also indicates that PHS/OMH support would be used to outfit the OSP with appropriate computer hardware, software, fax, and copier equipment to

perform office functions. In addition, funds from the PHS cooperative agreement would be used to support subscriptions to on-line services providing access to federal grant and contract information, solicitations, and program announcements. In summary, the expectations at UMES appear to have been entirely consistent with the announced intent of PHS.

5. Interventions Conducted Under the Capacity Building Program

As stated previously, UMES has not always had a centralized, systematic administration of sponsored programs. The only established administrative infrastructure related to sponsored programs prior to 1992 was limited to the administration of agricultural research programs. Thus, the current existence of the Office of Sponsored Programs (OSP), as an entity with university-wide responsibility, is a marked advancement over what existed in the past. The development of the OSP was clearly a direct result of the *HBCU Capacity Building Program*, which provided a total of $619,324 to UMES over the four-year program period. The program also provided the following technical assistance:

- A conference in which the original Project Officer met with the UMES OSP Director, along with the Project Directors from two of the other three participating institutions, as well as two consultants, each having experience as sponsored programs administrators who had started new sponsored programs offices;
- Annual site visits by the Project Officer, focused primarily on ensuring the understanding and cooperation of the university president in supporting the OSP development; and
- Two site visits and occasional telephone calls to the OSP by one of the consultants to provide sample documents and guidance primarily on the development of standard procedures for operation of the OSP.

The value of the technical assistance component of the program at UMES is unclear. The interview reports about the value of technical assistance (TA) were

inconsistent with previous written annual reports from the UMES OSP. Specifically, written reports indicated that the TA was "significant and substantial," including a statement that, "Without [the TA providers'] assistance, collaboration, and support, the OSP would not have been able to meet it's [sic] first year goals" (page 8, Program Plan Year 02, August 13, 1993). This strong statement, which appears as a closing note in the Program Plan, is in direct contradiction to the input from *all* interviewees at UMES, including key persons who reported that there was very little need for technical assistance in the OSP. In fact, even the TA Providers indicated, in their evaluation interviews, that they had very little involvement with UMES.

While it is not clear whether TA played a significant role at UMES, it is clear that the development of the OSP progressed well during the four-year program. Sponsored programs administration is now supported through a five-room facility with three professional staff and five student assistants. In a site visit, conducted in February of 1997 as part of the evaluation of the *HBCU Capacity Building Program*, it was clear that the OSP had developed functional systems for (1) record keeping and correspondence, as well as (2) a facility that is useful to faculty and (3) a staff that meets the needs of researchers on the faculty. Each of these three areas of development is discussed in detail in the sub-sections below.

a. OSP Administrative Recordkeeping and Correspondence

During the evaluation site visit, the records of the OSP were generally found to be well organized. The OSP staff have utilized a computerized project tracking system that UMES acquired from Tractell Corporation, for use by the OSP and by the university's Office of Business and Finance. It should be noted that the system, as used at UMES, does not readily permit the development of full records of the many dates that should to be tracked in a comprehensive system, such as submission date, award date, project period, and budget period. These reported weaknesses in the

recordkeeping are to be addressed, reportedly within the next year, as UMES conforms with the more comprehensive recordkeeping standards established for the entire University of Maryland System (UMS).

Currently, UMS requires semi-annual reports of "Award Business Transacted" during each half of each fiscal year, which runs from July 1 to June 30. These records, as previously required by UMS, do not include specific submission dates and award dates. The records do provide the following data for each award, new or renewed, that occurs during the respective reporting period:

- Project title;
- "Project Leader" or principal investigator (PI) name;
- Academic department of PI;
- "Sponsor" or funding agency; and
- Amount awarded for each funded proposal.

As implied in the list above, the OSP at UMES does not track the total number of submissions made to potential funders. Reportedly, faculty at UMES appreciate recognition for awards received, but they do not want to be cited for the extent of their unfunded submissions. Thus, only successful submissions are tracked. Clearly, this undermines any basic evaluation design insofar as it precludes efforts to compare institutions in the *rate* at which all submissions may have increased over the four-year period of the *HBCU Capacity Building Program.*

It should be noted that the OSP is responsible for competitive grants and contracts. This responsibility does not include the administration of support from Title III of the Higher Education Act, or from formula-based support that the U.S. Department of Agriculture (USDA) provides to UMES as an 1890 Land Grant institution. The OSP does, however, provide occasional assistance to both programs in proposal

development and in the financial tracking of project accounts. Thus, the OSP has records pertaining to the formula-based-grant projects, giving the university a single point of contact for access to basic project data on all externally sponsored programs.

In addition to the project profiles, the OSP staff provided the following important materials to demonstrate administrative and informative functions of the office:

- A sample Sponsored Programs Newsletter, produced quarterly by the office staff;
- A "Routing and Approval Form for Application/Proposal," indicating the necessary steps of review and approval that ensure proper administrative support for each project; and
- Copies of downloaded web pages regarding the UMES organizational structure and the OSP, including the *Manual for Sponsored Projects Administration* that informs faculty of all processing and compliance requirements.

b. OSP Facilities

The site visit included a review of facilities used for the administration of sponsored programs. The OSP is housed in a small building that includes the Early Childhood Development Center. As such, it is not on the central campus mall, although it is located conveniently close to the mall and to the central administration building. The OSP facility includes the following spaces:

- A small reception room that includes the desk for the Contracts and Grants Associate;
- A room that serves as a central common area, with a small bookcase of resource materials, project files, and the Assistant Director's desk;
- A second common area that includes a kitchenette, files of agency information and topical materials for use in proposal development, and office supplies;

- A small room with a computer for use by students or faculty in proposal writing; and

- A large room that serves as the Director's office, resource library and conference room.

The OSP resources also include hard-wired internet access, as well as extra copies of commonly used federal grant application forms on paper and in computerized formats. The computer equipment is particularly valuable, due to the OSP's subscriptions to on-line services that provide access to the *Commerce Business Daily* (CBD), the *Federal Register*, and the Illinois Research Information Service (IRIS), as well as numerous free sources of program funding information on the World Wide Web.

c. OSP Staff

The staffing of the OSP was essentially the same during the site visit as it was during the four years of PHS/OMH support. The OSP Director and student assistants have always been on State support since the creation of the office. The salaries of the other two professional staff members were funded by PHS and OMH through the four years of the *HBCU Capacity Building Program* and have been absorbed by UMES now that the OMH support has ended. It is notable that some of the current salary support for the office is derived from indirect expense money that is channeled to the OSP Director as a result of her position as Principal Investigator (PI) on other sponsored projects. She is able to do that, because, just this year, 1997, UMES has approved the channeling of 10 percent of indirect expense funds to the PI of a project, as was reportedly mandated by the UMS four years ago.

In summary, the OSP staff consists of the following three professional persons and roles:

- The Director has responsibility for overall supervision of the office and serving as liaison to potential funders. She also works directly with

approximately 25 faculty members to determine their research interests and to identify funding opportunities. In addition, she participates in the implementation of workshops on proposal writing and project management, and she assists faculty one-on-one with the development of competitive proposals. She also participates in IRB reviews.

- The Assistant Director has responsibility for working directly with a group of approximately 10 faculty members to determine their research interests and to identify appropriate funding opportunities. She produces annual and semiannual reports of sponsored program activity, required by UMS. She also helps faculty to troubleshoot internal administrative misunderstandings within UMES, especially in areas related to the development of project budgets and the post-award fiscal administration of projects. In addition, she monitors project compliance with applicable regulations.

- The Grants and Contracts Associate has responsibility for processing requisitions related to sponsored programs, ensuring that requisitions are consistent with sponsor regulations. She is also responsible for entering project data into the Tractell system that is used by both the OSP and the Business and Finance Office. In addition, she works directly with approximately 5 faculty members to identify funding opportunities related to their research interests. She also assists with report production and the proofreading of proposals.

It is worth noting that the staff also work together to produce a quarterly newsletter for distribution to the entire campus. Similarly, the OSP sends out targeted notices at least once per month to specific faculty members regarding appropriate funding opportunities.

It is also important to note that the majority of the OSP staff effort appears to be on pre-award functions, some of which is designed to ensure smooth administration of projects after they are funded. The OSP staff's post-award activities tend to be more focused on promoting effective communication on matters that are crucial to the PI, such as the following:

- Sending out a letter from the OSP Director, immediately upon receiving notice from a sponsor an award, congratulating the PI and informing or reminding him or her of the procedure for drawing project funds from the appropriate university account;

- Completing, typically through the efforts of the Assistant Director of the OSP, the Labor and Effort Reports and Equipment Reports required by the Office of Management and Budget (OMB); and

- Troubleshooting in response to accounting or reporting problems.

d. Other Interventions

Based on annual reports, it appears that the OSP at UMES apparently did not do certain things that were intended in their original program proposal, most notably (1) the hiring of consultants to assist with project development and (2) the devotion of resources specifically to help with editing and polishing of proposals. The OSP staff did act to perform those functions on an ad hoc internal basis, as resources allowed. Other notable specific interventions included the following:

- Use of World Wide Web hyperlinks, as part of the OSP's home page, to facilitate faculty access to a variety of web sites regarding federal funding sources, as well as access to downloadable application forms for grants from PHS and other agencies, and access to guidelines and regulations pertaining to the acquisition and management of sponsored programs;

- Participation in the university's new-faculty orientation and annual "faculty institutes" to inform and remind faculty of the role of the OSP and the importance of following appropriate procedures in the acquisition and management of externally sponsored programs;

- Logistical support for site visits by program sponsors, including assistance to faculty in presenting their program materials to visiting officials;

- Organizing of proposal-writing meetings among faculty to assist in the management of the proposal development process;

- One-on-one technical assistance, on an ad hoc basis, to guide faculty in the effective conduct of their own on-line information searches;

- Acquisition and distribution of computer equipment, from the surplus generated by federal agency equipment updates, so that more faculty have relatively modern in-office computers for proposal writing and other research-related functions; and

- Actively advocating and helping to shape the university's new Designated Research Initiative Funds (DRIF), by which 10 percent of indirect cost recovery is directed back to each PI for further research development.

6. Needs Addressed by the Capacity Building Program

The immediate needs that were to be addressed by the *HBCU Capacity Building Program* at UMES relate primarily to the administrative infrastructure for sponsored programs. In the year prior to the program, UMES had only one person assigned to monitor sponsored programs and to assist with proposal writing. With more than 265 faculty and research associates at UMES during that year, there were distinct limitations to the ability of one person to perform that role, especially given the lack of necessary computer facilities, file space, and other resources that are typically part of a sponsored programs office. As a direct result of the program, UMES was able to hire two additional professional staff persons and to acquire the necessary resources to build the OSP.

Interviewees indicated, during that site visit, that the program helped the university to overcome a deeper need: the need to commit significant start-up funds to the development of an office that would have sufficient resources to become quickly self-supporting. Thus, when asked what component of the program had the most significant positive impact on the OSP development, interviewees were consistent in citing the PHS/OMH *funding* as crucial. It should also be noted, however, that members of the faculty also cited the knowledge and capabilities of the OSP staff, and their customer-service orientation, as another critical component for making the office effective and *helpful* to them, as opposed to being just another layer of bureaucracy.

In summary, the program at UMES met the need of the university to develop a functional OSP that could increase the efficiency and effectiveness of faculty in

obtaining and managing external funds. Specific administrative needs being met by the OSP include the following:

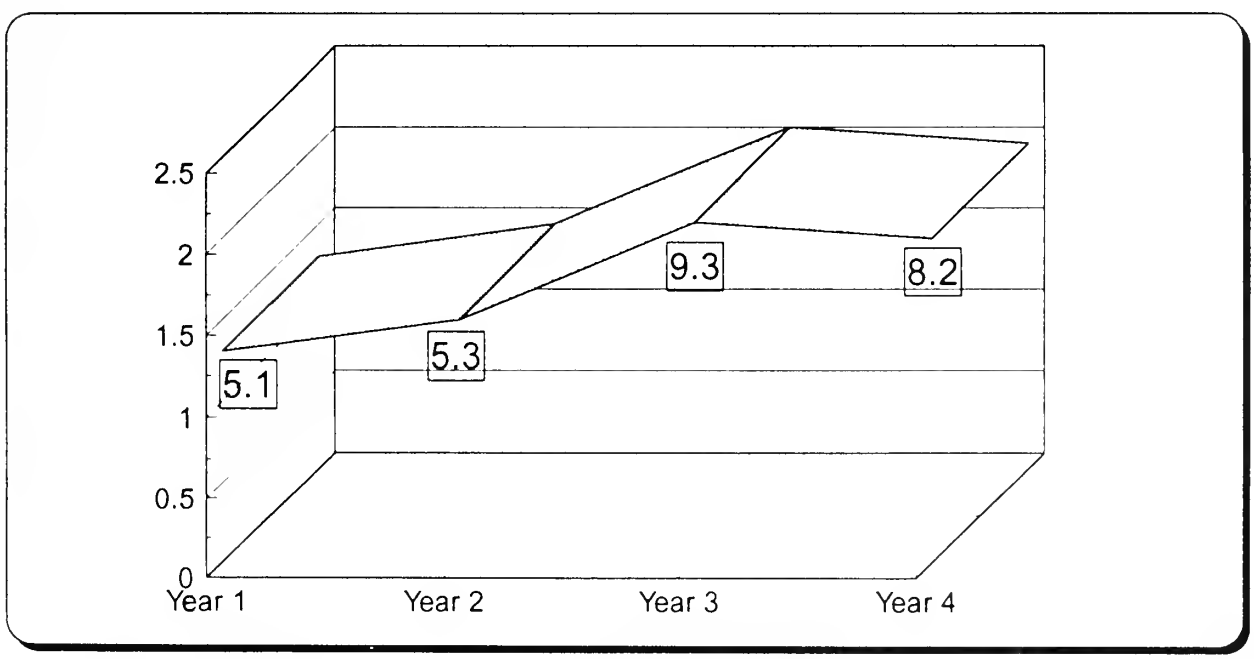
- Identification of institutional capabilities, especially through one-on-one attention to determining the nature of faculty research interests and activities;
- Identifying appropriate funding opportunities, and communicating the availability of those opportunities to appropriate faculty members;
- Assisting with proposal writing and revision;
- Assisting with budget development relating to both direct and indirect project costs;
- Tracking the development of proposals and sending out reminder notices regarding submission deadline dates and incomplete proposal components;
- Tracking project progress, and assisting with the production of required reports;
- Monitoring the design and implementation of projects to ensure compliance with applicable regulations;
- Developing and following uniform procedures for the acquisition and administration of externally sponsored projects;
- Developing and, to a degree, following uniform procedures for encouraging faculty involvement in sponsored programs;
- Giving more explicit structure to the UMES release time policy and its implementation; and
- Developing, establishing, and ensuring the application of a formula for the recouping of a percentage of indirect costs by PIs, although this formula does not direct a percentage from each project to the OSP.

In some ways, the direct development of the OSP has also helped to enhance the programmatic capabilities of UMES by expanding the base of funding for research and service programs. The total external funding, from non-formula-based programs,

increased from $5.1 million during the first year of the program to $8.2 million during the fourth year, as shown in Figure 23, an increase of nearly 61 percent. These totals include the PHS/OMH funds for capacity building. While this obviously represents an increase in the conduct of sponsored programs, it also represents a notable influx of revenue to cover indirect program costs. The DRIF policy ensures that some of this revenue is directed toward further development of research programs. The greater volume of sponsored research also contributes to an environment in which faculty see the increased successes of their colleagues and gain a greater interest in becoming involved in sponsored programs. The growth in sponsored programs has, perhaps most importantly, led to a sufficiently large increase in revenues to convince UMES administrators, conceptually and financially, that the OSP is a valuable asset for the university to sustain.

Figure 23

Dollar Amount, in Millions, of Competitive Awards and Continuation Awards Received by the University of Maryland Eastern Shore, by Year of Capacity Building



7. Relevant Needs Not Addressed by the Capacity Building Program

The OSP, as it was developed at UMES, performs "cradle to grave" administration of sponsored programs, meaning that the staff attempt to assist faculty with all phases of project administration, from identification of funding sources and development of the proposal through management of the project and close-out of the grant or contract. As such, the OSP meets most of the needs of faculty who use the office, to the extent that the office is capable of offering assistance at any given time. Naturally, there are limitations to the OSP resources. For example, the OSP staff report that the office could benefit from an additional person to focus on *copy editing.* Faculty also suggest that the OSP could provide true "one-stop shopping" if it were given direct authority over project accounts and had an *accountant* on staff to perform those functions, which are currently under the exclusive control of the Business and Finance Office at UMES. The OSP can only monitor accounts and inform PIs on the status of their budgets or the acceptability of budget-related requests. Other functions which appear to have received low priority include the following:

- Use of faculty surveys, of which two have been performed since 1991, to focus OSP outreach to a larger number of faculty members;
- Conduct of external marketing of the institution to promote the image of UMES as a competitor for funds; and
- Establishment of a formula that would channel indirect expense funds to the OSP or, in any other way, establish the full staff of the OSP as line items in the university budget.

It is worth noting that, according to the OSP Director, the only one of the three issues that is a significant concern, of the three listed above. That is the third issue, the lack of a line-item commitment of the university to the OSP staff. The first issue, disuse of faculty research interest data is not viewed as a problem, because the OSP reportedly is near its capacity in handling the sponsored program needs of the 40 to 50

faculty who currently make regular use of the OSP resources. The OSP Director gives higher priority to meeting needs of interested faculty, rather than expending more resources to coax disinterested faculty into the office. The second issue, not engaging in an external marketing campaign, reflects the OSP philosophy that such marketing tends to be political in nature, so that it cannot substitute for the production of high-quality proposals and the successful administration of programs that deliver what they promise. Thus, the priority of the OSP is on the administrative functions that are deemed to be central to its mission, rather than on marketing.

8. Summary of Outcomes Indicating Program Success

In order to summarize and characterize the outcomes of the *HBCU Capacity Building Program* at UMES, it is necessary to consider the prior capacity that existed at the university for the conduct of sponsored programs. As stated previously, UMES had the benefit of a strong programmatic infrastructure, with over 265 faculty and research associates at the start of the program in 1992. By February, 1997, the university faculty had grown to approximately 300, implying an increase of as much as 13 percent in the personnel who might partially define the research capacity of UMES. By contrast, the number of PIs on competitively acquired sponsored programs rose from 21 during the first year of the program to 40 during the fourth year, an increase of more than 90 percent. The number of PIs receiving competitive award during each of the four years is displayed in Figure 24. If one uses the year *before* the program as a baseline, when there were only 5 PIs reported on competitively acquired programs, the increase over the full four years of the program would be gauged at the enormous figure of 700 percent. When these figures are combined with the previously cited 61 percent increase in competitively acquired funding for sponsored programs from the first year of the program to the fourth, it is easy to conclude that the program was a success at UMES. Other indicators of program success include the following:

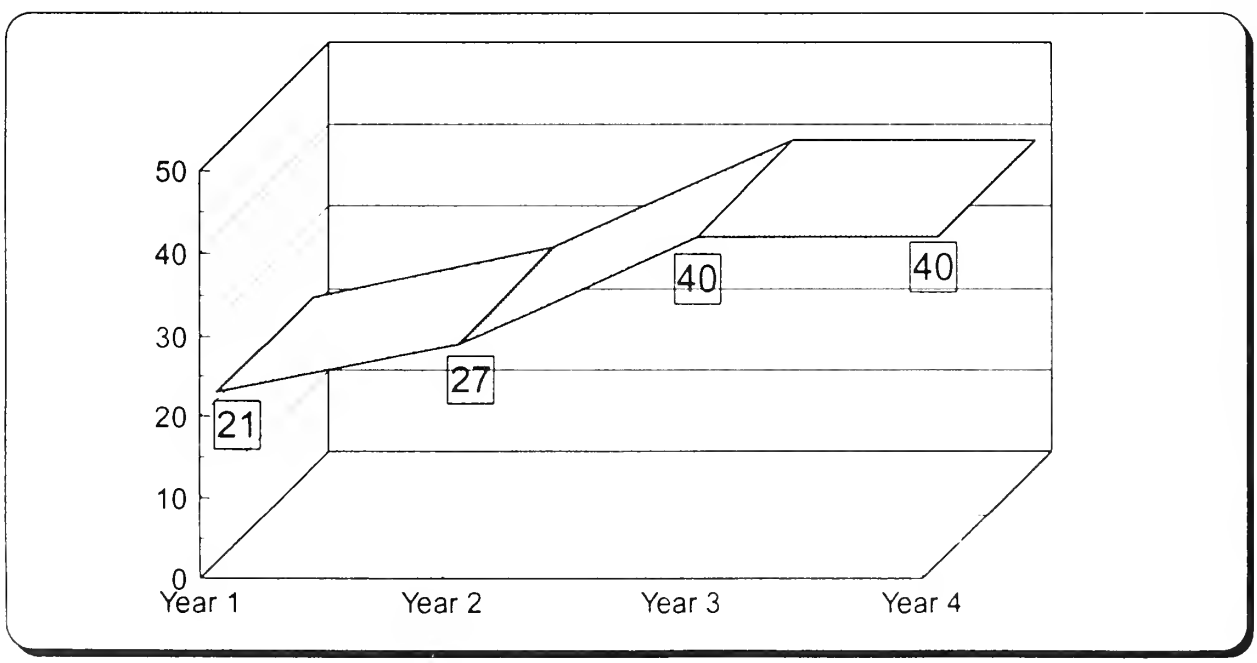
- UMES experienced an increase in the participation of at least two departments, the Fine Arts department and English and Modern Languages Department, which had no involvement in sponsored programs at the start of the capacity building in 1992.

- UMES received sponsored program funding from 16 private, state, or federal agencies during the fourth year that were not among the list of supporters during the first year, suggesting that the university was successful in seeking out new sources of program funding.

- Perhaps not surprisingly, given the recent reductions in state and federal funding to colleges and universities, the total number of funding sources *decreased* from 34 sources during the first year to 30 during the fourth year. This is a function of there being 7 federal sources and 7 state sources during the first year that were not among the funders during the fourth year. In the fourth year, 9 of the federal sources were the same as in the first year, and only 5 federal sources had been added. Similarly, in the fourth year, 3 state sources were the same as in the first year, and only 2 state sources had been added. By contrast, there were 6 private sources that were lost after the first year, 2 that were the same in the first and fourth years, and 9 fourth year sources that were new since the first year.

Figure 24

Number of PIs Receiving Competitive Awards and Continuation Awards at University of Maryland Eastern Shore, by Year of Capacity Building

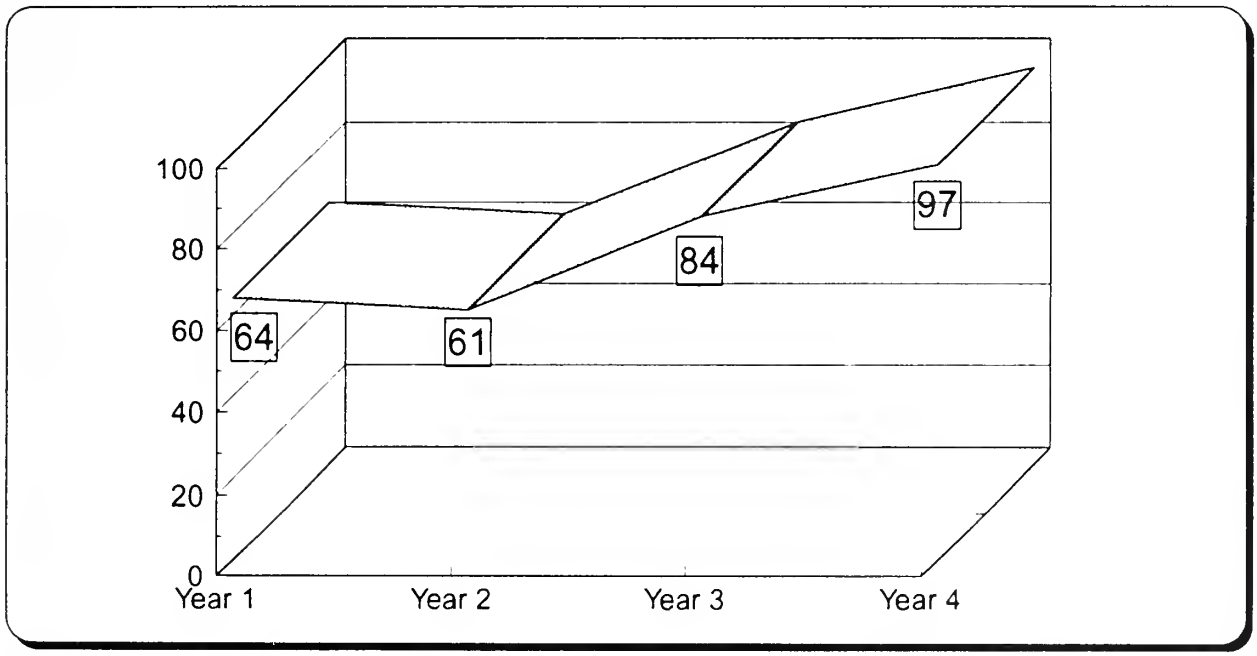


- Data were not clear regarding the renewal or sustenance of existing funding. Many of the programs, including the *HBCU Capacity Building Program*, were intended to have fixed periods of funding. Qualitative feedback from faculty and administrators suggests, however, that the OSP has helped to ensure program responsiveness and regulatory compliance, the lack of which had previously been responsible for the loss of program funds.

- UMES records show that the number of funded awards rose during each year of capacity building, from 64 in the first year to 97 in the fourth year, as shown in Figure 25.

Figure 25

Number of Competitive Awards and Continuation Awards Received by University of Maryland Eastern Shore, by Year of Capacity Building



Together, these results suggest that significant improvements were made in the acquisition and management of externally sponsored programs during the four years of PHS/OMH funding for the OSP at UMES. As of the end of the program support, it is clear that the university could take additional steps to bolster that success, particularly by expanding and more fully institutionalizing the OSP.

9. Summary of Extra-Program Factors Affecting Program Outcomes

The impact of the PHS/OMH support for the OSP at UMES did not occur in a vacuum. Accordingly, it is difficult to know the extent to which the increases in sponsored program funding and faculty participation may have resulted directly from the capacity building effort. It is notable that UMES benefited from a very consistent administration, within the OSP and in the university as a whole. The OSP staff report that the UMES president was consistently supportive of the OSP throughout the four-year program period. According to faculty, the OSP was well-received among researchers also, particularly after the first year of start-up activities, during which the office staff had to demonstrate the substantive improvements that the OSP had made over previous university attempts to administer sponsored programs without devoting adequate resources. In addition to consistent faculty and administrative support for the OSP, the following factors have been suggested by interviewees as likely influences on the success of the PHS/OMH program at UMES:

- The federal grants administration expertise of the OSP Director, who followed her own implicit model of OSP development by trying to put in place the administrative functions that she had desired, admired, or required when she was a federal employee having to interact with sponsored programs offices;

- The physical plant improvements to UMES, just prior to the hiring of the OSP Director in 1991, including the refurbishing of buildings and the development of modern, networked computers in science and library facilities; and

- The designation of UMES as the state's doctoral-degree-granting institution of the Eastern Shore, combined with the status of UMES as one of the campuses of the already respected University of Maryland System.

V. COMPARATIVE ANALYSIS OF CASE STUDIES

A. IDENTIFICATION OF COMMON INDICATORS OF PROGRAM PROCESSES, OUTCOMES, AND CAUSAL FACTORS

As described in Section II of this report, the data collection and analysis for the evaluation of the *HBCU Capacity Building Program* depended on the early development of a logic model that would specify the theoretically relevant programmatic assumptions, actions, and outcomes, as well as the logical links among those variables. In conducting the comparative analyses, it was necessary to examine the extent to which the four HBCUs in the program were consistent on the identified variables, and then to examine the patterns of differences among the cases to determine which patterns appeared to be associated with success on the targeted program goals, as specified in the logic model.

The logic model identified eight major program goals that were to be achieved through the PHS/OMH capacity building program for the establishment of a sponsored programs office (SPO) at each of the four HBCUs. These goals, labeled as "Final Outcomes," included the following:

1) An increase in the number of grant submissions,

2) An increase in the number of grant awards,

3) An increase in the total number of grant dollars awarded,

4) An increase in the number of faculty who were awarded a competitive grant or contract,

5) An increase in the variety of fields to which grants or contracts were awarded,

6) An increase in the number and value of DHHS grants, and

7) Increased compliance with the standard regulatory and statutory rules governing grant and contract awards,

8) The achievement of self-sufficiency for the sponsored programs office.

In order to begin the formal Boolean algebraic analysis of the case comparisons, goal attainment was coded using a binary scale: A goal was either achieved or not. Thus, a goal that was achieved was scored as a "1," and a goal that was not achieved was scored as "0." This scoring process was carried out in four stages.

At the first stage, a table of outcomes was created for each goal displaying the results for each HBCU across the four years of the PHS capacity building grant. Only the four years of the program were covered because reliable data on the number and value of awards to each institution were not consistently available for prior years.

At the second stage, fourth year achievement was measured against first year achievement. If the performance was better in the fourth year than in the first year, then the HBCU was assigned a "1" for the goal. If performance in the fourth year was clearly no better or poorer than in the first year, the HBCU was assigned a "0" for the goal. For the first four Final Outcomes, this method of assigning scores was easy to carry out. Coding the achievement of the next two Final Outcomes, increasing the diversity of fields represented among funded projects and increasing the institution's involvement with DHHS grants and contracts, required more interpretation of the available data. Only the two extreme cases, DSU and UMES, showed clear results on changes in field diversity, with DSU clearly losing field diversity and UMES clearly gaining over the four-year project period. As a consequence, a third stage was included in the analysis to simplify the more complex findings for the other two institutions, SPC and SSU.

During the third stage, the results from year 1 and year 2 were added together and compared to the data from years three and four, which also had been added

together. This "split-halves" approach allowed for a clear assignment of the binary code for all four HBCUs.

At the fourth and final stage, the evaluation team as a whole reviewed the coding assignments. No codes were changed.

Having thus completed the binary coding of HBCU goal achievement for the first six Final Outcomes in the logic model, it was still necessary to code the remaining two Final Outcomes: better regulatory compliance, and SPO self-sufficiency. For these two Final Outcomes, clear quantitative or categorical data were not available, making it necessary to rely on more subjective data in order to assign the binary codes of achievement or non-achievement. The goal of compliance was assessed during the site visit interviews. It was generally agreed at all four institutions that regulatory compliance had improved considerably as a consequence of the efforts of the sponsored program offices. In two cases, DSU and UMES, the SPOs revived or restructured existing institutional review boards (IRBs) and review processes. In the other two cases, SPC and SSU, the SPOs were successful in creating and putting into place the requisite review boards and procedures. In all four cases, this represented an important enhancement to the programmatic capacity of the institutions to compete for certain grants that previously had been more difficult or impossible to obtain. Thus, all four institutions were scored as having achieved the goal of improved regulatory compliance.

In order to assess the achievement of self-sufficiency, the annual cost to operate the sponsored programs office at each institution was estimated, based on the annual office budget submitted to PHS or OMH for each year of capacity building. For analytical purposes, it was assumed that this would be the *minimum* dollar amount that would be required to run the office. In fact, this estimate is somewhat low, given the fact that some of the budgets did not include salary for certain key personnel or support

staff. The indirect expense recovery rate of each institution was then used to determine how many grant or contract dollars the HBCU would need to receive each year to produce indirect dollars equal to the estimated annual operating budget of the SPO. This amount of grant or contract award dollars was set as the absolute minimum break-even point for the SPO to become self sustaining. Under this least conservative assumption, all four sponsored programs offices were judged to be self-sufficient. In order to make the analysis somewhat more realistic, it was assumed that only half of the grant or contract awards could be burdened with an indirect rate, given the fact that many awards were for equipment or training grants. When the data were reanalyzed under this new assumption, only DSU and UMES broke even or were self-sufficient. If the data are further reanalyzed to assume that only one-half of the indirect costs can go to the sponsored programs office, which is still a highly generous assumption in light of the need to use indirect funds to pay other general operating expenses of the institution, then only UMES continues to break even. This final analysis was used as the most realistic descriptor of self-sufficiency.

The ultimate result of the binary coding is a logic table, in which the codes are displayed for all four of the cases. The full results of the analyses of goal achievement are displayed in Table 15. The "All" column in the table simply reflects the achievement of the desired Final Outcome across all four HBCUs. If the Final Outcome was achieved for all of the institutions, the result is a "1." If any of the HBCUs did not achieve that Final Outcome, the result is a "0."

Table 15 also permits a simple assessment of Final Outcome achievement at a glance. As indicated, persistent and fairly strong differences exist between the four HBCUs in the degree to which they accomplished the Final Outcomes. Clearly, SSU and UMES were the most successful in attaining the desired Final Outcomes. DSU was only able to achieve two of eight Final Outcomes, while SPC lay in the middle with four of eight.

Table 15

Logic Table of Achieved Program Final Outcomes, by HBCU

Desired Final Outcome	HBCU				
	DSU	SPC	SSU	UMES	All
Increased number of submissions	0	1	1	?	0
Increased number of awards	0	1	1	1	0
Increased dollar value of awards	0	0	1	1	0
Increased number of PIs	1	1	1	1	1
Increased variety of fields represented among awards	0	0	1	1	0
Increased compliance with requirements	1	1	1	1	1
Increased involvement with DHHS: funding and number of awards	0	0	1	1	0
Sponsored Program Office becomes self-sufficient	0	0	0	1	0
Proportion of Final Outcomes Achieved	25.0%	50.0%	87.5%	87.5%	25.0%

For two of the Final Outcomes, increased participation in research by faculty and increased capacity to comply with grant conditions, all four institutions were able to achieve success. The development of a strong compliance system will broaden the number and types of grants that faculty at all four HBCUs can pursue. Similarly, the increases in faculty participation may be particularly important for the future of the HBCUs as competitors in the grant and contract arena. Success on this Final Outcome suggests that all four HBCUs have experienced some expansion of their programmatic capacity, as a result of increases in administrative capacity. What is unclear in this simple comparison is whether the faculties will sustain an interest in pursuing grant or contract awards. For this reason, it is important to qualify the binary coding in Table 15 with the understanding, from the case histories presented earlier, that SSU and UMES added the majority of their "new" PIs in the third and fourth year, which is evidence of a

growth trend in PI participation. By contrast, DSU and SPC had the majority of their "new" PIs during year 1 and year 2, suggesting that, at these two institutions, the SPOs have not sustained, at least thus far, a growing wave of faculty interest in sponsored programs. Because SPC captured such a large proportion of the faculty from the beginning, it may be possible that the SPO has, in effect, exhausted its market. This is less likely to be true with the larger faculty at DSU.

When the other six Final Outcomes are examined, a more complex pattern emerges. The SPO at DSU achieved none of the other six Final Outcomes. At SPC, the SPO achieved two of the six remaining Final Outcomes, increasing the number of submissions of sponsored program proposals and the number of awards. The SPO at SSU was able to achieve five of six Final Outcomes, only failing to attain self-sufficiency for the sponsored programs office. At UMES, data clearly show achievement of five of the remaining six Final Outcomes, including self-sufficiency for the SPO. It was not possible to determine whether UMES attained the goal of increased submissions, because the SPO did not maintain summary data on this issue. Given the fact that there was a steady increase in the number of awards over the four years of the capacity building grant, it is reasonable to assume that submissions were probably going up.

In order to understand the potential causes of the differences among the four HBCUs in their Final Outcome achievement, the evaluation team continued the Boolean algebraic analysis of the relationship between goal achievement, as presented earlier in Table 15, and the logical precursors to such achievement. Accordingly, it was necessary to code all of the variables in the logic model in a binary fashion. The resulting logic tables are presented in their entirety in Appendix C. Having completed that coding process, the evaluation team proceeded to identify relevant precursors of Final Outcome achievement, as discussed in the following sub-section.

B. COMPARATIVE BOOLEAN LOGIC TABLE ANALYSIS

1. Logic Table Analysis of Common Paths of Causality

In order to assess the extent to which the four institutions differed in their capacity building success, the logic model was reviewed. This logic model represents an hypothesized causal chain. Breaks in the chain are expected to diminish the likelihood that a final goal is achieved. In the context of the Boolean analysis, this means that the most relevant Assumptions, Activities, Immediate Outcomes, or Intermediate Outcomes to analyze in the logic model were those on which at least one of the HBCUs was scored as having a "0." The "0" would imply a break in the chain that had been expected to lead to success of the capacity building. Consequently, the analysis would focus on identifying whether such breaks corresponded to lesser achievement of final outcomes.

By looking for items in the logic model that were "true" for all four HBCUs or "false" for all four HBCUs, it was possible to cull out many of the variables in the logic model as irrelevant. It should be noted that there were *no items* in the logic model that were false for all four HBCUs. Among the consistently true items were, for example, the Assumption that all four HBCUs *lacked adequate resources for proposal production* prior to capacity building, and the Intermediate Outcome that all four SPOs have been *able to help faculty in identifying funding opportunities.* On these and 26 other logical precursors to program success, all four HBCUs were coded as having fit the Assumption, having engaged in the program Activity, or having reached the Immediate and Intermediate Outcomes that were expected. Out of a total of 64 identified logical precursors to program success, this left 16 precursors, as shown in Table 16, that were to be the focus of further analysis.

Table 16

Logic Table of the Variations Among the Four HBCUs on Their Consistency with Program Assumptions, Expected Activities, Immediate Outcomes, and Intermediate Outcomes

Assumption, Activity, or Immediate or Intermediate Outcome on which HBCUs Differed	HBCU			
	DSU	SPC	SSU	UMES
Faculty aware of SPO training opportunities	1	0	0	1
Institution had externally visible commitment to SPO	1	0	0	0
Institution had internally visible commitment to SPO	1	0	0	1
Provision of equal amounts of technical assistance	1	1	0	0
SPO staff or Director had significant experience in sponsored programs administration	0	0	1	1
SPO Director dedicated 100%	0	0	1	1
SPO Director faced no internal threats to authority*	0	1	0	1
SPO Director had authority & control of over staff*	1	1	0	1
SPO Director had received specific training in SPO development and management*	1	0	0	0
SPO increased capacity to market institution	1	1	0	0
SPO increased capacity to track grants post-award	0	1	0	0
SPO tracked grants after award	0	1	0	0
SPO built into indirect funds formula	0	0	1	0
Department built into indirect funds formula	0	0	1	0
PI's built into indirect funds formula	1	0	1	1
SPO actively marketed institution	1	1	0	0

**These factors were derived from available data, as specific management elements of the Intermediate Outcomes related to capacity for administration of sponsored programs*

2. Findings Regarding Overall Program Effectiveness

Based on the finding, from Table 15, of the greater success of SSU and UMES in achieving the Final Outcomes, the evaluation team further focused the analysis to address the precursor items on which SSU and UMES were found, in Table 16, to have

conjointly differed from DSU and SPC. In five of the precursors, there were consistent differences between the two pairs of institutions along the causal chain proposed by the logic model. These five instances are displayed in Table 17. For practical purposes, two of the items are treated as one finding: that increased SPO capacity to market the institution to potential funders, and increased SPO activity in marketing the institution, It is apparent that DSU and SPC devoted significant resources to such marketing. Comparisons among the four HBCUs on each of the resulting four items are discussed separately in the following sub-sections.

Table 17
Logic Table of the Variations Among the Four HBCUs on Five Clear Distinguishing Factors

Activity, Immediate Outcome, or Intermediate Outcome	HBCU			
	DSU	SPC	SSU	UMES
Provision of equal amounts of technical assistance	1	1	0	0
SPO staff or Director had significant experience in sponsored programs administration	0	0	1	1
SPO Director dedicated 100%	0	0	1	1
SPO increased capacity to market institution	1	1	0	0
SPO actively marketed institution	1	1	0	0

a. Receipt of Substantial Amounts of Technical Assistance

The available data suggest that DSU and SPC received more technical assistance than either SSU or UMES. The case histories suggest that this was largely due to three factors:

- Management and staffing problems of the SPO at SSU led to the complete restaffing of the office in 1995, after the technical assistance providers had reduced their overall participation in the capacity building program;

- The new SPO staff at SSU included an experienced sponsored programs administrator as Assistant Director; and

- The Director of the SPO at UMES was somewhat experienced as a sponsored programs administrator and very experienced from the federal perspective of interacting with SPOs.

Given these circumstances, the finding regarding level of technical assistance is evidently confounded with the finding, discussed below, that the SPOs at SPC and DSU did not have the benefit of experienced sponsored programs administrators on their staffs. More importantly, this finding implies that technical assistance, as it was structured by PHS and OMH, may not have been an adequate substitute for the hiring of at least one experienced staff member who could provide consistent, on-site guidance in the development of the SPO and its functions.

b. Hiring of Experienced Sponsored Programs Office Staff

As stated above, a clear distinguishing feature of SSU and UMES was their hiring or assignment of at least one knowledgeable and experienced sponsored programs administrator to serve on the SPO staff. The evidence summarized earlier, in Tables 15 and 16, suggest that this may have been an important factor in guiding the SPOs at those two institutions toward achievement of their desired Final Outcomes. Again, however, this finding must be considered in the context of the other factors that distinguish SSU and UMES from DSU and SPC. In particular, this finding pertains to the ability of the staff to meet the needs of the SPO, which may be confounded directly with the finding, discussed in the next sub-section, of the full-time commitment of the SPO director at SSU and UMES. Without additional cases, having different combinations of these precursors to success, it is not possible to tease out the relative importance of having experienced staff members. Nonetheless, it is reasonable to conclude, from these findings, that future capacity building efforts should benefit from a direct effort to ensure that the SPO has at least one of the following:

- An experienced sponsored programs administrator as the SPO Director,
- An SPO Director or administrator who has received long-term training in the establishment and operation of such an office; or
- An experienced sponsored programs administrator on the staff, receiving appropriate deference from the Director on key aspects of the day-to-day operation of the SPO.

c. Proportion of the Director's Time Commitment to the SPO

The available data indicate that neither DSU nor SPC had the benefit of a full-time Director in the SPO, while SSU and UMES did have Directors with a full-time commitment to the SPO. Given the concurrent finding that DSU and SPC had limited success in achieving their Final Outcomes, it is important to highlight possible reasons why the lesser commitment at DSU and SPC might have led to less success. The reasons are different at the two institutions.

In the previously presented case history of SPC, it is clear that, during three of the four years of capacity, the director of the SPO was simultaneously serving as the Interim Vice President for Academic Affairs. While this provided him with an opportunity to promote the idea of sponsored research among the faculty, it necessarily implies that he could not maintain a constant focus on the development of the SPO. The small size of SPC may have minimized the impact of this problem, as the SPO was able to achieve some success across half of the desired Final Outcomes.

At DSU, the Director officially had a full-time commitment to the SPO, although the circumstances discussed in the case history indicate that other duties impinged on that commitment. Specifically, at least one factor appears to have been a unique distracter:

- In addition to being the Director of Sponsored Programs, the Director also serves as Associate Dean of Research, making it necessary for the

Director and her staff to commit time and resources, on occasion, to activities in support of the Dean.

Accordingly, for the purposes of this analysis, DSU was coded as having had an SPO Director with less than 100 percent time dedicated to sponsored programs administration.

In contrast to the DSU and SPC situations of divided attention, the SPO directors at SSU and UMES were full-time directors during the four-year program, with one reporting directly to the President and the other reporting to the Vice President of Academic Affairs. It is noteworthy that the SPO Director at UMES reported a kind of escape from distractions, as a result of the early relocation of the SPO from a single office next door to the Academic Vice President, to a suite that is in a separate building from the top Academic division offices. The SPO Director at UMES specifically cited this move as having reduced the tendency of the Academic Vice President to ask for the SPO Director's immediate assistance on non-SPO business.

Thus, the joint consideration of circumstances at the four HBCUs point to the potential importance of taking at least the following steps to ensure adequate directorial commitment to the SPO:

- The Director should have a full-time commitment to the business of monitoring and managing the SPO, as well as participating actively in functions of that office;
- The Director may benefit from having a high position in the organizational hierarchy to minimize potential impingement from assignments that flow down the hierarchy;
- The Director may be less likely to receive distracting assignments if the physical location of the SPO Director's office does not facilitate distractions from other individuals who are above the SPO in the institutional hierarchy; and

- The Director may be less likely to receive distracting assignments if the SPO Director's role is explicitly and consistently defined and understood to exclude distracting assignments from other individuals who are above the SPO in the institutional hierarchy.

d. Devotion of Resources to increasing Institutional Marketing to Potential Funders

As indicated earlier in Table 16, both DSU and SPC devoted significantly greater resources to the development of an institutional marketing capacity, as well as to carrying out activities of marketing of the institution. Marketing included such actions as making trips specifically for the purpose of visiting federal offices, or attending federally-sponsored conferences. By contrast, the SPO at SSU was distracted from pursuing the development of a marketing capacity during the first two years, for both internal and external marketing, and had only begun to address marketing systematically during the last year of the capacity building effort. The SPO at UMES deliberately eschewed any attempt to develop a marketing capacity. The director of the office at UMES believed that faculty members were more likely to be effective at marketing themselves and the institution than she and her office would be, as long as they were kept aware of appropriate opportunities for sponsored research and applicable services that they could receive from the SPO. Thus, to some degree, the SPOs at SSU and UMES actually conserved resources for other activities by not engaging in external marketing.

Given the confounding of the marketing findings with the other distinguishing factors presented earlier, it may not make sense to assign too much significance to the counter-intuitive notion that an SPO can be more successful if it does not actively engage in marketing. Even so, the comparison does suggest the following *possibly* significant considerations:

- Early development and operation of an SPO may progress more effectively by focusing attention on the competition for funding through the

effective identification of appropriate, published funding opportunities, as well as the development of responsive proposals, rather than by actively marketing the capabilities of the institution in a more abstract mode of project development;

- The impiementation of active external marketing of the institution by the SPO cannot substitute for other factors, such as having experienced and committed staff to attend to other aspects of SPO operations; and

- It may be possible that a relatively high level of prior experience of SPO staff may substitute for a more active marketing strategy, because the staff would have familiar links to various funding agencies, as well as knowledge of the agency programs and requirements, making it less necessary to take actions aimed at *exploring* the market.

As a finai caveat on marketing, it is important to note that the three considerations above relate only to the ability of the HBCU to respond to federal initiatives. Clearly, marketing can be beneficial if the SPO is active in helping an agency to develop initiatives that would take advantage of unique capabilities of the particular HBCU. Thus, this finding should not be construed as a denouncement of institutional marketing by the SPO. It does, however, imply that certain strategies of market exploration are less necessary when the HBCU and its SPO have an established track record in familiar program areas where federal agencies are continuing to offer funding.

3. Findings Regarding Unique Program Processes and Outcomes

A careful examination of the other logical precursors to success, presented earlier in Table 16, identifies some other important differences among the institutions in their *fit* with elements of the logic model. Specifically, there are seven items on which certain HBCUs differed uniquely from each other, as shown in Table 18. These unique aspects of the *HBCU Capacity Building Program*, as implemented at each HBCU, are discussed in separate sub-sections relating to each HBCU.

Table 18

Logic Table of the Five Unique Variations Among the Four HBCUs

Assumption, Activity, or Immediate or Intermediate Outcome on which HBCUs Differed	HBCU			
	DSU	SPC	SSU	UMES
Institution had externally visible commitment to SPO	1	0	0	0
SPO Director had received specific training in SPO development and management	1	0	0	0
SPO increased capacity to track grants post-award	0	1	0	0
SPO tracked grants after award	0	1	0	0
SPO built into indirect funds formula	0	0	1	0

a. Unique Program Elements at Delaware State University

According to findings reflected in Table 18, DSU had two unique program elements:

- Strong, externally visible commitment of the institution to sponsored programs; and
- The receipt, by the SPO Director, of partial training specifically related to the establishment and operation of a comprehensive SPO.

If these findings are reviewed in terms of their relevance to DSU's difficulty in achieving its desired Final Outcomes, only the second finding appears to be potentially important. Specifically, the case history, presented earlier in Section IV, indicates that the partial Project TAPS training of the SPO Director in development and management of an SPO, and the subsequent receipt of that training by another DSU faculty member, may have served as a distraction, without resulting in the transfer of that training to the staff of the SPO. Thus, the training itself may not have been the unique factor detracting from

DSU success, as much as the interpersonal dynamics that were an inadvertent side-effect of the training situation.

b. Unique Program Elements at Saint Paul's College

Table 18, presented previously, also shows that SPC had two unique program elements:

- Increased capacity to conduct post-award tracking; and
- Increased post-award administration.

It should be noted that these findings reflect the relatively high *degree* of attention that SPC gave to post-award processes through its SPO. The other three institutions relegated most of the post-award functions to their institutions' respective Business offices. While SPC did not have outstanding success in achieving the desired Final Outcomes, the college did enjoy some success in increasing proposal submissions and the number of awards and PIs. That success may have been partly as a result of greater attention to the business aspects of projects. This would come closer than the other three institutions in giving faculty the "one-stop shopping" that faculty desire in sponsored programs administration.

c. Unique Program Elements at Savannah State University

The most unique aspect of SSU's program appears to have had minimal consequences by the end of the capacity building effort. Unlike the other three HBCUs, SSU succeeded in having the SPO included prominently in the formula for distribution of indirect expense funds. However, as of February of 1997, this advancement had not taken on any substance. This is due, perhaps, to the university not having reached a sufficiently stable financial condition to permit the actual use of the indirect expense sharing formula. The SPO Director at SSU overcame this problem by pursuing another

unique strategy: the development of a Survey Research Center as a revenue-generating arm of the SPO. Thus, despite turbulent circumstances at SSU, its SPO appears to be at least as well institutionalized as the SPOs at the other three HBCUs, if not more so.

d. Unique Program Elements at the University of Maryland Eastern Shore

Out of the 64 precursors of capacity building program success in the logic model, UMES did not have any program elements that were unique among the four HBCUs. The unique finding at UMES, as stated earlier, is the fact that it appears to be the only institution that stimulated enough indirect expense revenue, through sponsored programs, to make the SPO arguably "self-sufficient." However, this finding, by itself, does not contribute substantively to the explanation of the dynamics of capacity building in the four HBCUs.

VI. SUMMARY OF SIGNIFICANT FINDINGS

Overall, the foregoing analyses indicate that all four participating HBCUs benefited from the *HBCU Capacity Building Program.* It is important to be explicit, however, in summarizing the findings in a manner that relates directly to the six evaluation questions articulated in Section I, as well as other pertinent questions identified by the evaluation team. Accordingly, while all of the findings in Sections III, IV, and V are important and will enhance the understanding of factors that might lead to success in developing and operating an SPO, certain findings must be considered especially significant as key indicators of successful program processes or outcomes. Those findings that have been deemed as *significant* are presented in the listing which follows. The first six findings pertain to the six evaluation questions, to the extent that they may be answered just at the end of the program. The additional findings address fundamental issues that appear to have had a major impact on the effectiveness of the capacity building program.

1) The program succeeded in establishing a sponsored programs office (SPO) at each of the four participating HBCUs, including the adoption by these offices of uniform processes for pre-award and post-award functions of sponsored programs administration.

2) The program was clearly found to have resulted in increased funding for research, training, evaluation, and service projects at two of the participating HBCUs; performance at the other two HBCUs showed initial increases, but did not sustain a clear trend of increased participation.

3) The program clearly resulted in enhanced sponsored program activities at one of the participating HBCUs, as indicated by a greater variety of academic departments that pursued contract and grant awards. To a lesser extent, two of the other HBCUs showed increased involvement of their various departments in pursuit of such awards.

4) The cooperative efforts and technical assistance of the Federal and non-Federal partners in the capacity building program were regarded by staff of the SPOs at all four of the participating HBCUs as being quite

helpful to the establishment and operation of their offices. However, those efforts were not identified as being instrumental to the accomplishment of one of the program's primary goals, to increase the acquisition of contract and grant awards.

5) Program success at all four participating HBCUs, as measured by increased submissions and awards, as well as effective office operation, was found to have been dependent on only one major contextual factor: the positioning of the SPO within the administrative hierarchy of the institution's organizational structure.

6) The program led to lasting change in the willingness and ability of the President and other top administrators, at all four participating HBCUs, to support an SPO staff and facility, at least in the first year immediately following the end of the *HBCU Capacity Building Program.*

7) As of the data collection period ending in February, 1997, no policies had been *implemented* at the four participating HBCUs, although established at one of these institutions and discussed at the other three, for channeling a fixed percentage of indirect expense funds recovered through contract and grant awards, toward the operating budgets of their SPOs. However, a commitment to institutionalize such offices has been made by all four of the HBCUs.

8) The outlay for salary is the greatest expense required for the operation of a fully functional and comprehensive SPO, as reflected in the budgets for annual awards from PHS and OMH to the four participating HBCUs.

9) The capacity building efforts led to greater dollar amounts for contracts and grants that were received by the four participating HBCUs, collectively. The program did *not*, however, lead to a collective increase in awards from DHHS.

10) The development of an effective administrative infrastructure, in the form of an SPO, was found to be a *necessary* institutional component for the pursuit of sponsored programs. However, at all four HBCUs, this type of capacity building was found *not* to be *sufficient* for increasing involvement in sponsored programs, as measured through increased contract and grant awards. Evidence points to the necessity of also having a strong programmatic infrastructure of facilities, equipment, and personnel.

Given these significant findings, and other related findings presented in the analytic sections of this report, it is evident that the *HBCU Capacity Building Program*

largely validated the general hypothesis that was the basis of the PHS decision to launch the demonstration program:

> *This demonstration program is to assess whether an infrastructure responsible for the administration of sponsored programs will enable HBCU institutions to increase their participation in Federal and private sector health related scientific, technical and service activities and thereby improve their capacity to conduct such activities* (Federal Register, Vol. 57, No. 123, page 28522).

The program clearly succeeded in demonstrating that an SPO can and, under a variety of conditions, *does* enable an HBCU to increase its sponsored programs participation. The program distinctly increased the capacity of the four participating HBCUs to conduct externally funded scientific, technical, and service activities, which relate to health, social services, and many other disciplines. Thus, while the program did not achieve some of its intended final outcomes, it was quite successful in achieving the majority of intended outcomes.

VII. SUMMARY OF MAJOR RECOMMENDATIONS

The following recommendations are drawn from findings presented above. These recommendations are strictly limited to issues that are within the purview of OMH and DHHS, regarding actions that can be taken to conduct effective capacity building at HBCUs. Based on the evaluation of the *HBCU Capacity Building Program*, the following major recommendations are offered:

1) DHHS should, through OMH and other appropriate avenues, use this demonstration program and its core elements as the basis for further capacity building at other HBCUs that lack an administrative infrastructure for sponsored programs.

2) Future capacity building, focused on the administrative infrastructure for sponsored programs, should be coordinated with efforts to ensure the competitiveness of the programmatic infrastructure of each participating HBCU, if significant impacts are to be sought within a given project period.

3) As part of capacity building efforts at HBCUs, the SPO administrators should be provided long-term training, as well as on-the-job technical assistance, to give each SPO Director an adequate understanding of how to establish and operate a sponsored programs office, prior to the launching of that office.

4) The technical assistance component of the program should be modified and intensified to ensure that administrators at each HBCU fully understand and implement suggested principles and procedures of sponsored programs administration. Such modification would include careful monitoring to determine whether the HBCU heeds advice in a

timely manner. It could also include an explicit partnership between each HBCU and another institution with a successful SPO.

5) The development of a sponsored programs office should include greater integration, within the sponsored programs office, of post-award activities, such as monitoring, accounting, and administrative guidance to faculty. Alternatively, the program should include more direct attention to the provision of technical assistance and other support to improve coordination between the SPO and the Business/Finance office, which often plays a major role in post-award administration.

6) In implementing the type of capacity building program initiated by PHS, the participating institution should be strongly encouraged to position the sponsored programs office directly under the President, or directly under the Vice President for Academic Affairs, in order to maximize the visibility of the office to faculty, and to minimize the potential for other administrators to reprioritize or de-emphasize the primary mission of the office.

7) In the building of HBCU capacity through SPO development, the participating institution should be strongly encouraged to institutionalize the office of sponsored programs by committing a significant percentage of indirect expense funds, obtained through grants and contracts, toward the operating expenses of the office.

8) The funding agency, for future capacity building efforts, should develop and disseminate explicit recordkeeping requirements, based on a comprehensive evaluation plan, and ensure that participating HBCUs, technical assistance providers, and agency personnel maintain the required records in an accurate and accessible manner as a condition of participating in the program.

VIII. IMPLICATIONS FOR FUTURE STUDY AND POLICY DEVELOPMENT

The previous two sections of this evaluation report have been tightly focused on the findings pertaining to the evaluation questions raised by OMH, the facilitator for the DHHS capacity building effort, as well as the recommendations that emanated from those findings. All of these recommendations have policy implications, and are within the purview of DHHS, should a decision be made to provide further support to the HBCU capacity building efforts. The scope of these tightly focused recommendations, however, does not lend itself to consideration of the broader context of policy issues that may ultimately determine the future of the HBCU capacity building in DHHS. At least the following four such issues, which are discussed in detail in separate sub-sections, have been identified by the evaluation team as being worthy of future attention:

- The need to determine an appropriate funding level for HBCU capacity building;
- The importance of pursuing aggressive entrepreneurship and partnership development as a means of institutional survival;
- The need to understand complex institutional incentives that affect HBCUs in their transition towards greater participation in federal programs; and
- The importance of continuing to build HBCU capacity as a fundamental approach toward greater HBCU participation in federal programs.

A. THE NEED TO DETERMINE APPROPRIATE FUNDING LEVEL

In the course of the evaluation of the *HBCU Capacity Building Program*, numerous questions have surfaced, from within DHHS and from the HBCU community, regarding a cost/benefit perspective on the success of the program. The current

evaluation was neither designed nor intended to provide such an analysis for at least two reasons:

1) Many of the likely benefits of increased capacity at HBCUs are not readily measurable in dollar terms, such as improved understanding of minority populations by DHHS, increased DHHS access to African-American communities, and increased flow of African-Americans into the medical and biomedical research professions; and

2) Important, measurable indicators of success, such as changes in the number or value of grants and contracts established between HBCUs and DHHS, cannot be expected to serve as stable measures of program impact so soon after program implementation.

During data collection interviews, the original Program Officer was careful to point out that the DHHS *HBCU Capacity Building Program* was not expected to yield the kinds of immediate, measurable, dollar-for-dollar benefits often sought in some special programs. In fact, no such immediate results were articulated in the original PHS program announcement or within the evaluation parameters.

In the absence of clear cost/benefit data, DHHS is left with an important question that was not included among the evaluation objectives: Did DHHS get a good return on its investment in the *HBCU Capacity Building Program*? This question is important partly because it leads directly to an even more concrete question that has clear policy implications: Should DHHS make comparable investments in other HBCUs?

During the data collection process, interviewees within OMH raised the issue that DHHS has put a significant amount of money into the capacity building effort, without seeing immediate results that would clearly justify similar investments in other HBCUs. The expectation, according to these interviewees, is that other executive departments could use the OMH program as a model on which to base similar HBCU capacity building efforts. Similarly, these interviewees suggested that DHHS could support further capacity building through inter-agency agreements or other

mechanisms by which a significant portion of funding could come from sources other than DHHS.

Given the relative lack of tangible rewards obtained by DHHS from the recent demonstration effort, it is not surprising that the agency might consider avoiding further expenditures on HBCU capacity building. It is worth noting, however, that the HBCU capacity building effort is consistent with the unique mission of OMH, and DHHS in general, and their cross-cutting responsibility to promote policies and programs that might improve research and delivery of services affecting minority health. The history and mission of most HBCUs make them ideal resources for carrying out such DHHS efforts, as long as the HBCUs have sufficient programmatic and *administrative* infrastructure to do so. For these reasons, the evaluation data can clearly support any initiative that would provide capacity building funds to other HBCUs at a level comparable to that used in the four demonstration projects. If anything, the findings suggest that a higher level of funding would be appropriate, particularly if the increased funding were directed toward the following:

- More formally structured training for SPO Directors in the administrative, operational, and political considerations of setting up and managing a comprehensive SPO that is fully functional; and
- Enhancements of specific aspects of an HBCU's *programmatic* infrastructure, as needed to ensure competitiveness in a selected area of research or service desired by DHHS.

In most HBCUs that have a strong need for capacity building, staff salary will create the greatest need for funding development of an SPO. Thus, the only way that a smaller investment by DHHS could be feasible in future capacity building efforts would be through one of the following two program options:

1) Investment in HBCUs that are already poised for conduct of externally funded research and have relatively little need for technical or financial assistance; or

2) Investment in HBCUs through coordinated mechanisms, such as inter-agency agreements, that would reduce the DHHS share of the investment.

The first option would leave unaided those HBCUs with the greatest need, going against the spirit of the Executive Orders that call for assistance to HBCUs. The second option has been considered by OMH officials, particularly through efforts of the DHHS Sub-Committee on HBCU Capacity Building, in 1994 and 1995, but without success in enlisting the help of other agencies.

The available data suggest that DHHS, through OMH, utilized an appropriate funding level for the *HBCU Capacity Building Program*, to the extent that the funding permitted achievement of the stated objectives. The data also imply that, in any future capacity building efforts, the most appropriate funding level should depend on the specific needs of the institution. It is evident that a relatively high level of funding is especially important for institutions that have the greatest need for capacity building, which are those that need to expand human resources significantly, to acquire necessary equipment, to configure facilities, and to receive intensive technical assistance and training on the operation of an SPO. It is also evident that the success of capacity building, in some institutions, would be enhanced by a coordinated effort to fund *programmatic* infrastructure in conjunction with the development of *administrative* infrastructure.

Ultimately, an appropriate level of funding and a maximally effective mechanism for HBCU capacity building has yet to be determined. The *HBCU Capacity Building Program* was not initially intended to compete with other forms of assistance to HBCUs, nor was the evaluation designed to draw direct cost/benefit comparisons among various programs that assist HBCUs. In the current climate of decreasing federal funds available for such efforts, the cost/benefit issues deserve to be explored more explicitly in the future, in order to gain a better understanding of the value and distinctive role of

HBCU capacity building, relative to other departmental mechanisms for promoting HBCU participation in DHHS programs.

B. THE IMPORTANCE OF ENTREPRENEURSHIP AND PARTNERSHIP

The successes achieved by the SPOs in the four demonstration projects often appeared to be related to the ability of the SPO Director to take an entrepreneurial approach to the acquisition of sponsored programs. For example, such entrepreneurship includes the development of the Survey Research Center at SSU, intensive attention to faculty needs and interests at UMES and SPC, and the strong focus on building support networks between DSU and the SPO directors at other institutions. A significant aspect of the entrepreneurial activity also appears to be the development of partnerships with other institutions. This was evident at SSU and SPC, where strong ties were developed with community based organizations that sought to conduct community improvement and service projects. Those community based organizations often lacked their own administrative infrastructure or the institutional stability of a well-established college or university. At UMES, the university's status as "the doctoral degree granting institution on Maryland's Eastern Shore" helped to spur partnerships with nearby state institutions, such as Salisbury State University, for the development of joint graduate programs through the sharing of resources. Such sharing of resources has the effect of increasing the capacity of the institution to market itself to funding agencies for a larger variety of projects.

While the available data are too sparse to permit strong conclusions about how to promote particular types of entrepreneurship in particular HBCU settings, it is evident that this is an area which deserves future attention. Clearly, an SPO that does not employ entrepreneurial creativity and enthusiasm will be at a disadvantage in a competitive marketplace of grants and contracts. Most colleges and universities, however, have traditionally fostered an atmosphere of "academic freedom," in which the mindset of the entrepreneur is shunned as being overly commercial and

economically restrictive. From a policy perspective, this implies that future HBCU capacity building should explicitly promote an entrepreneurial approach to SPO development and operation. Otherwise, the success of the SPO could be undermined by the failure to accept and participate in the competitive realities of external funding opportunities, which include grants and contracts. The promotion of entrepreneurship at HBCUs could come in the form of training, technical assistance, conferences, or other media. In any of these cases, it should be acknowledged that the promotion of an entrepreneurial approach to sponsored programs appears to be an appropriate supplement, not a substitute, for the other aspects of technical assistance and financial support that comprised the *HBCU Capacity Building Program.*

C. THE NEED TO UNDERSTAND INSTITUTIONAL INCENTIVES FOR CHANGE

Although the *HBCU Capacity Building Program* was designed with attention to several aspects of providing incentives for faculty participation in sponsored programs, it is evident that such incentives must go beyond the obvious policy considerations of release time, bonuses, and the availability of a share of indirect expense funds for laboratory equipment. In order to ensure growth in faculty participation in sponsored programs at HBCUs, or institutions of higher education, in general, it will be important to address the entrenched aspects of institutional politics as they affect faculty willingness to invest time and resources in research rather than in teaching, and in the pursuance of sponsored programs rather than private consulting.

Two complex issues, among others that influence the success of sponsored programs offices, are (1) faculty behavior and (2) the impact of different incentives for faculty to conduct research. If strong incentives were to exist for faculty to engage in sponsored research, then it would be reasonable to assume that the development of an SPO would increase the levels of success achieved by faculty in pursuing grants or contracts. However, if few incentives exist, or numerous *disincentives* exist, then the

development of an SPO might not lead to a significant increase in faculty participation in sponsored research. From an economic perspective, the marginal cost of research must not exceed the marginal gain from it. Thus, in developing an effective SPO, it would be important to ensure that the SPO can identify and address the most influential or salient costs and gains associated with participating in sponsored programs at the targeted college or university.

From an academic institutional perspective, there appear to be four major incentives that typically influence participation in sponsored research. They are as follows:

1) Release time,

2) Financial rewards,

3) The needs of "scholarship" in academia, and

4) The tenure and advancement system and the role of scholarship in tenure.

Release time is a critical incentive for faculty. The institutions that received the capacity building funding from PHS and OMH have long traditions of being teaching institutions, not research institutions. As a consequence, they tend to require teaching loads of between 12 and 15 hours a week, plus office hours and student counseling. For faculty to be able to conduct research, they must be "released" from some of their teaching duties, or else they will have little incentive or capacity to engage in research. For tenured faculty, this is likely to be particularly true as they will have little if any incentive to add to their work load with no expectation of compensating increases in their professional status and job security.

Financial rewards have also been at least a topic of discussion between the SPO and the administration at all four HBCUs. Only UMES and DSU have clearly

succeeded in implementing policies that include financial incentives, specifically relating to the sharing of indirect expense funds. Unfortunately, the formulas for disseminating these funds include the distribution of significant percentages to department chairs and deans. While such formulas have important goals of ensuring the availability of seed money for new researchers, this also creates a kind of *disincentive* for potential principal investigators to pursue sponsored programs participation, known in economics as the "free rider" problem. To the extent that a faculty member knows that some of the benefit of his or her hard-fought funds are simply "given away" to other faculty, there is a distinct chance of faculty choosing to get program funds either through less difficult channels or through channels that will not "unduly" benefit others. At SSU, for example, these factors may have come into play among Business faculty who are known to be regularly engaged in consulting activities, none of which are currently processed as sponsored programs of the university.

All four SPOs that participated in the HBCU capacity building effort have been active in proposing financial incentives for faculty members who are conducting sponsored research. The extent of their success, however, has been limited by other circumstances at the individual institutions. At DSU, for example, the ability of the SPO to influence faculty work conditions is limited by the fact that DSU faculty are governed by a collective bargaining agreement. Thus, the SPO cannot advocate substantial incentives to sponsored programs involvement, other than any incentives that have been arranged in negotiations between the faculty and the university administration. Further, the SPO's ability to influence administration policies or positions, regarding incentives or other issues, appears to be limited by the organizational placement of the office. Unlike the other three SPOs, which report to the Academic Vice President or President, DSU's SPO reports to the Dean of Research who in turn reports to the Vice President for Academic Affairs. Together, these two conditions might suggest a need to give the SPO an explicit role in working with faculty union leaders, as well as with

faculty members as individuals, to promote the adoption of acceptable and desirable incentives for participation in sponsored programs.

On the issue of academic scholarship, it is notable that, traditionally, prestige and honor are generally attached to publication records, not to the receipt of grants or contracts. However, success in acquiring contract and grant awards is swiftly becoming a source of prestige for faculty within college and university communities. This is especially true if the award is associated with funding to conduct research, which will allow for ultimate publication of the results. The area in which the research is conducted is another consideration in the quest for prestige. For example, many researchers in the humanities need not receive external funding for their research, which might only require personal investment in a fact-finding journey during a sabbatical. Similarly, in Business, Social Sciences, and some branches of the Humanities, publications may emerge from consulting efforts that are not considered institutional projects. In fact, as indicated in at least two of the participating HBCUs, such consulting often occurs in a competitive market, in which a personal services contract bid may have a greater likelihood of award than an institutional contract bid with its accompanying burdens relating to indirect expenses and release time. In short, the *HBCU Capacity Building Program* has demonstrated that there are powerful disincentives to faculty involvement in sponsored programs, and that these disincentives may require greater attention in future capacity building efforts. This is particularly true where faculty, of both HBCUs and non-HBCUs, have been accustomed to pursuing their professional goals through avenues other than sponsored programs.

In addition to giving consideration to faculty incentives, it is also important for capacity building efforts to include explicit acknowledgment of political forces which may act among administrative offices to restrict the activity of an SPO. For example, many administrators have an ultimate career goal of becoming a college or university

president, which requires an outstanding history of institutional fundraising, as much as outstanding administrative leadership. Naturally, the introduction of an active, entrepreneurial SPO can upset the traditional norms of institutional fundraising, creating "turf issues" for administrators who are professionally invested in those norms. Accordingly, UMES and DSU reported some early brushes with Development Office administrators who wanted to protect their fundraising turf. Informal contacts between the evaluation team and numerous HBCUs have tended to support the notion that SPOs may thrive or whither depending on their political positioning within the institution.

Given that the SPO-related incentives at the faculty level and the administrative level are not well researched in colleges and universities, it may be beneficial for future HBCU capacity building efforts to include, or be supplemented by, explicit research into the specific incentive systems at the targeted institutions. Such research could help to shape the programmatic activities that are pursued by the new SPO. Similarly, the research could shape the development of agency requirements of assurances that the funded institution will provide appropriate incentives for research activities and SPO development.

D. THE IMPORTANCE OF CONTINUING TO BUILD HBCU CAPACITY

The evaluation of the *HBCU Capacity Building Program* has generally helped to solidify the initial hypothesis of PHS regarding the importance of a strong administrative infrastructure for sponsored programs. This is an important general finding, as many HBCUs and other small to medium-sized institutions are struggling for their survival in the current climate of diminished public resources for education, relative to the increased numbers and varieties of students seeking an education. In such a climate, HBCUs will need to develop the entrepreneurial capacity that is afforded by a comprehensive SPO.

Unfortunately, many federal funding opportunities aimed at HBCUs are conference-oriented, or they are projects for which competition is largely limited to HBCUs. Such programs have historically provided significant funding to HBCUs, but they have not facilitated HBCU access to the levels of funding that are available to institutions of higher education through more mainstream mechanisms. Such mainstream competition, as stated in the opening sections of this report, depends on the institution's ability to find funding opportunities that are well suited to institutional capabilities, to pursue those opportunities aggressively and in a manner that is responsive to agency requirements.

The evaluation data from the *HBCU Capacity Building Program* generally confirm the notion that a well staffed and equipped SPO plays a valuable role in helping an HBCU to engage in an aggressive, strategic, and responsive competition for program funds. The data also indicate that the SPO plays a necessary administrative role in support of individual faculty who do not generally have the institutional knowledge or authority to respond to agency requirements for contract proposals, grant applications, or fiscal management of awarded projects. Further, the case histories from this evaluation demonstrate that the SPO plays an important role in developing institutional partnerships that might strengthen a contract proposal or grant application, whereas an individual faculty member does not have authority to commit the institution to partnerships. Thus, in an HBCU without a comprehensive SPO that is fully functional, faculty face major disadvantages relative to their colleagues at institutions that have a strong administrative infrastructure.

By focusing on giving HBCUs the tools to compete, the *HBCU Capacity Building Program* is unique. The indications of program success, relative to most of the program objectives, as expressed in the announcement of the effort, have significant policy implications that go beyond this particular program. Clearly, as the evaluation data indicate, the building of HBCU capacity through SPO development has lived up to

the proverb of teaching a person to fish for a lifetime of sustenance, rather than just giving fish to that person to eat for a day. Notably, however, the capacity building program provided more than just knowledge to the participating HBCUs about how to compete for federal funds. The program also provided the necessary resources for staff and equipment to develop some degree of self-sufficiency. In addition, unlike many federal programs designed to assist HBCUs, the DHHS capacity building effort allowed the participating institutions to develop their administrative infrastructure broadly, with attention to a variety of agencies, not just DHHS. Thus, the *HBCU Capacity Building Program* may represent an important new approach to assisting HBCUs by facilitating fundamental change of the institution, rather than eliciting specific instances of HBCU involvement in isolated program areas.

Such a fundamental approach to capacity building has the potential to yield broad benefits for the participating HBCUs. These may or may not include directly observable short-term benefits for DHHS. As suggested in the consideration of cost/benefit perspectives on the capacity building effort, the leadership of DHHS faces a difficult choice: to support this fundamental enhancement of HBCUs as viable *potential* resources, or to favor less fundamental actions that provide piecemeal assistance toward specific and demonstrable short-term goals of an agency or department. There is also a need to determine whether this type of fundamental change, to build administrative infrastructure at HBCUs, is sufficient to ensure institutional competitiveness, or whether there are other barriers that must also be overcome. Ultimately, the most significant policy issue that emerges from this evaluation may be the evident need for DHHS and other agencies to make clearly articulated and well coordinated choices regarding the direction of HBCU initiatives. Further careful research into the existing multiple approaches by which federal agencies have sought to increase the capacity of HBCUs to *compete* for grants and contracts will illuminate and direct these options.

APPENDIX

FULL SET OF COMPARATIVE ANALYSIS LOGIC TABLES

Table A–1: Logic Table for Logic Model Assumptions Coded by HBCU

Assumption	HBCU				Status of Assumption
	DSU	SPC	SSU	UMES	
Prior to SPO faculty lacked access to proposal production resources	1	1	1	1	True
Prior to SPO faculty lacked administrative management resources to manage awards	1	1	1	1	True
Prior to SPO faculty lacked awareness of sponsored research funding opportunities	1	1	1	1	True
Prior to SPO faculty laced awareness of training opportunities in proposal production	1	1	1	1	True
Prior to SPO faculty lacked awareness of training opportunities in award management	0	1	1	0	False
Prior to SPO institution lacked experience in sponsored programs administration	1	1	1	1	True
Institution lacked sponsored programs staff	1	1	1	1	True
SPO equipment lacking	1	1	1	1	True
Lacked uniform procedures for administration of awards	1	1	1	1	True
Lacked faculty incentives to pursue sponsored research grants	1	1	1	0	False
Institutions lacked externally visible commitment to the pursuit of sponsored programs	0	1	1	1	False
Institutions lacked internally visible commitment to assisting faculty in getting awards	0	1	1	0	False

1 = True, 0 = False

Table A–2: Logic Table for Logic Model Activities Coded by HBCU

Activities	HBCU				Status of Activity
	DSU	SPC	SSU	UMES	
Each institution provided with equal funds to develop SPO	1	1	1	1	True
Each institution provided with equal amounts of technical assistance (TA) in the development of an SPO	1	1	0	0	False
Site visits conducted to each institution	1	1	1	1	True
Annual reviews of each institution conducted	1	1	1	1	True
Each institution provided with information about PHS agencies	1	1	1	1	True
Each institution provided with information about grants and contracts awarded by other federal agencies	0	0	0	0	False

1 = True, 0 = False

Table A-3: Logic Table for Logic Model Immediate Outcomes Coded by HBCU

Immediate Outcome	HBCU				Status of Outcome
	DSU	SPC	SSU	UMES	
Increased Staff for SPO	1	1	1	1	True
Acquisition of improved, dedicated electronic SPO systems	1	1	1	1	True
SPO Director had received specific training in SPO development and management	1	0	0	0	False
Increased awareness of grant sponsor requirements	1	1	1	1	True
Identification of barriers to faculty participation in sponsored programs	1	1	1	1	True
Establishment of independent SPO	1	1	1	1	True
SPO led by dedicated director	0	0	1	1	False
SPO director had authority and control over staff	?	1	0	1	False
SPO director faced no threats to authority during life of grant	0	1	0	1	False
SPO staff or Director had significant experience in sponsored programs administration	0	0	1	1	False

1 = True, 0 = False

Table A–4: Logic Table for Logic Model First Intermediate Outcomes Coded by HBCU

First Intermediate Outcome	HBCU				Status of Outcome
	DSU	SPC	SSU	UMES	
SPO increased capacity to identify institutional capabilities	1	1	1	1	True
SPO increased capacity to market institution	1	1	0	0	False
SPO increased capacity to identify appropriate funding opportunities	1	1	1	1	True
SPO increased capacity to assist faculty with proposal writing and revision	1	1	1	1	True
SPO increased capacity to assist faculty with proposal production	1	1	1	1	True
SPO increased capacity to assist faculty with budget development	1	1	1	1	True
SPO increased capacity to assist with program auditing	0	0	0	0	*False*
SPO increased capacity to track proposal development	1	1	1	1	True
SPO increased capacity to track grants post–award	0	1	0	0	False
SPO increased capacity to assist with preparation of progress reports	1	1	1	1	True
SPO increased capacity to assist with regulatory compliance	1	1	1	1	True
SPO increased capacity to develop and follow uniform procedures for sponsored programs administration	1	1	1	1	True
SPO recommended appropriate policies for release time	1	1	1	1	True
SPO recommended appropriate policies for indirect expense accounting	1	1	1	1	True
SPO recomrnended appropriate policies for sign–off requirements on proposal submissions	1	1	1	1	True
SPO recommended appropriate policies for channeling of indirect expense funds to SPO	1	1	1	1	True
SPO recommended appropriate policies for channeling of indirect expense funds to departments	1	1	1	1	True
SPO recommended appropriate policies for channeling of indirect expense funds to PIs	1	1	1	1	True

1 = True, 0 = False

Table A-5: Logic Table for Logic Model Second Intermediate Outcomes Coded by HBCU

Second Intermediate Outcome	HBCU				Status of Outcome
	DSU	SPC	SSU	UMES	
SPO significantly increased actions to identify institutional capabilities	1	1	1	1	True
SPO significantly increased actions to market institution	1	1	0	0	False
SPO significantly increased actions to identify appropriate funding opportunities	1	1	1	1	True
SPO significantly increased actions to assist faculty with proposal writing and revision	1	1	1	1	True
SPO significantly increased actions to assist faculty with proposal production	1	1	1	1	True
SPO significantly increased actions to assist faculty with budget development	1	1	1	1	True
SPO significantly increased actions to assist with program auditing	0	0	0	0	*False*
SPO significantly increased actions to track proposal development	1	1	1	1	True
SPO significantly increased actions to track grants post-award	0	1	0	0	False
SPO significantly increased actions to assist with preparation of progress reports	1	1	1	1	True
SPO significantly increased actions to assist with regulatory compliance	1	1	1	1	True
SPO significantly increased actions to develop and follow uniform procedures for sponsored programs administration	1	1	1	1	True
HBCU adopted appropriate policies for release time	1	1	1	1	True
HBCU adopted appropriate policies for indirect expense accounting	1	1	1	1	True
HBCU adopted appropriate policies for sign-off requirements on proposal submissions	1	1	1	1	True
HBCU adopted appropriate policies for channeling of indirect expense funds to SPO	0	0	1	0	False
HBCU adopted appropriate policies for channeling of indirect expense funds to departments	0	0	1	0	False
HBCU adopted appropriate policies for channeling of indirect expense funds to PIs	1	1	1	1	True

1 = True, 0 = False

Table A-6: Logic Table for Logic Model Final Outcomes Coded by HBCU

Final Outcome	HBCU				Status of Outcome
	DSU	SPC	SSU	UMES	
Increased number of submissions	0	1	1	?	False
Increased number of awards	0	1	1	1	False
Increased dollar value of awards	0	0	1	1	False
Increased number of PIs	1	1	1	1	True
Increased variety of fields represented among submissions	0	0	1	1	False
Increased compliance with requirements	1	1	1	1	True
Increased involvement with DHHS: funding and number of awards	0	0	1	1	False
Sponsored Program Office becomes self-sufficient	0	0	0	1	False

1 = True, 0 = False